DOCUMENT RESUME

ED 045 592 24 SP 004 486

AUTHOR Whipple, Babette S.
TITLE Evaluation of a Small-Group Technique as a Teacher Training Instrument. Final Report.
INSTITUTION Wheelock Coll., Boston, Mass.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO ER-8-A-053
PUB DATE Apr 70
GRANT OEG-1-9-080053-0104 (010)
NOTE 116p.

EDRS PRICE EDRS Price MF-$0.50 HC-$5.90
DESCRIPTORS *Evaluation Techniques, *Group Instruction, *Small Group Instruction, Student Teachers, Teacher Attitudes, *Teacher Education, Teacher Improvement, *Teaching Techniques

ABSTRACT

An exploratory study was designed to determine whether the use of a new, small group technique adds significantly to the level of training in early childhood education. Two groups of five student teachers learned the technique and were then evaluated. The evaluation procedure was designed to measure changes in their educational objectives, their teaching techniques, and their teaching styles. Six types of data were collected for evaluation: 1) a final paper written by the students, 2) adult Grouptalk sessions, 3) ratings of Grouptalk leadership based on tape recordings, 4) student problems Q-sort, 5) teacher ratings, and 6) student teacher paragraph completion test. Two sources of quantitative data yielded inconclusive results, partly because the ratings of performance were obtained before the experimental training had been completed, and partly because of the questionable reliability of the measurements. The small size of the sample justified placing major emphasis on the analysis of the residual data, including the responses to a projective test, and the final papers. The analysis indicated that the experimental groups increased their self-understanding, gained a more mature perspective on their role, and became more sensitive observers of the children's thinking and needs. It is recommended that Grouptalk training be added to the curriculum of teacher training institutions. (MBM)

Final Report

Project No. 8-A-053
Grant No. OEG-1-9-080053-0104(010)

# Evaluation of a Small Group Technique as a Teacher Training Instrument



Babette S. Whipple, Ph. D.
Wheelock College

Boston, Massachusetts

April 1970

The research reported herein was performed pursuant to a grant with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

CONTENTS

Page

TABLES (Cont.)

## PREFACE

The numerous approaches followed today to improve teacher training are harbingers to the increased vitality of our educational system. This paper reports an exploratory study undertaken to determine whether a new small group technique, "Grouptalk," adds significantly to the already high level of student teacher training offered by a college which specializes in early education and has a strong liberal arts program. Wheelock College shares the goals of modern educators who hope to prepare today's children for the world of tomorrow, and has tailored its curriculum to prepare teachers with skills needed in addition to those of the "traditional" teacher. Emphasis is placed on training the teacher to understand how children think and to comprehend the complex relationships between personality and learning, and on helping individuals develop their unique potentialities in an informal group setting. The college recognizes the greater need for maturity in the beginning teacher in an unstructured teaching environment than was necessary for the new teacher in the more rigid, traditional classroom. The total program for preparing teachers at Wheelock College is oriented toward achieving these goals.

The willingness of Dr. Margaret H. Merry, President of Wheelock College, to sponsor my research project in harmony with this educational philosophy, is greatly appreciated.

It is a pleasure to acknowledge the contributions to the project made by a number of colleagues. I am most indebted to Henry H. Atkins, who was Principal of the Underwood Elementary School in Newton, Massachusetts, at the time plans were made with Wheelock College to undertake this cooperative study. He did much more than initiate the contact and help think through the detailed proposals for a grant. In the early days of my research on Grouptalk with children at the Underwood School he was intrigued with the potential value of having teachers learn the technique. He urged me to offer Grouptalk technique training to staff members and student teachers working at Underwood. Their cooperation then helped channel its further development. His enthusiasm for the results was contagious. Without it, this project would have never materialized.

I would also like to thank Mrs. Carmella D. Nadeau, Principal of the Underwood Elementary School at the time of the experimental study, and those members of the staff who gave so generously of their time: Miss Sally E. Clark, Mrs. Ruth K. Davies, Miss Kathryn A. DeSano, Mrs. Louise J. Hauser, Mrs. Bessie B. Lyman, Mrs. Kristin L. Oldenburgh, Miss Marilyn Flanagan, Miss Katharine Sawyer, Miss Agnes L. Scully and Mrs. Susan W. Tregay. I am also indebted to the Principals of the Davis, Cabot and Ward Elementary Schools in Newton, Miss Henrietta Brebia, Mrs. Mary B. Winslow and Miss Madeline E. Bartell, and the following teachers at these schools for their willingness to supervise the students in the control groups and participate in the evaluation procedure: Mrs. Laura G. Avery, Mrs. Bonnie Bivins,

Miss Marcia J. Baur, Mrs. Mabel D. Ellis, Miss Barbara Kagan, Miss Aileen A. Lynch, Miss Dorothy A. Mattson, Miss Rose V. Mroszczyk and Mrs. Sharyn L. Weiner.

I am deeply grateful to Dr. Alma Bent, Chairman of the Teacher Education Department of Wheelock College, for her administrative help in carrying out the teacher training project. She generously made room for the study in her own education course and took the major responsibility for all arrangements involving the participating Wheelock students and cooperating teachers in the Newton Public School system. Her evaluations of the student teachers contributed substantially to the project because of her background of many years' experience in the supervision of student teachers and her extensive contact with the girls in both the experimental and control groups. I also want to thank all the student teachers who participated in the project for their essential and individual contributions. Mrs. Betty Lou Marple, my husband, Dr. Fred L. Whipple, and Mrs. Janet Moat have each made valuable editorial suggestions.

# I. INTRODUCTION

## A. SUMMARY

An exploratory study in the field of teacher training was designed to determine whether the use of a new small group technique adds significantly to the already high level of training offered by a college which specializes in early childhood education. While they were apprentices in the Underwood Elementary School in Newton, Massachusetts, two groups of five Wheelock College student teachers each learned a new technique called "Grouptalk," a specific type of small group discussion which I had previously devised as a tool to help increase thinking, communication and social skills. They learned it by participating in seven adult Grouptalks, reading my instruction manual, observing me lead a discussion with a small group of second graders, leading the same group of children in six Grouptalk sessions, analyzing the taped sessions in conferences with me, and, finally, by writing a report. The contribution of this very brief training program to the students' preparation as teachers was evaluated in six ways, four of them with the help of matched control groups, classmates in the same educational curriculum class, apprenticed at other elementary schools in Newton.

Two sources of quantitative data yield inconclusive results, in part because the cooperating teachers' and supervisor's ratings on performance, actual and potential, were obtained before the experimental training had been completed, in part because of the questionable reliability of the measurements. The small size of the sample warrants placing major emphasis on the analysis of the residual data, which includes the students' responses to a projective test and their final papers.

Analysis of these data indicate gains from Grouptalk training in the directions anticipated. The experimental groups increased their self-understanding and gained a more mature perspective regarding their role as teachers by examining in depth the nature and limits of effective authority. They also became more sensitive observers of children's thinking and needs. In comparison with the control groups, their understanding of how second graders learn, especially from their peers, became more concrete and meaningful. Above all, Grouptalk increased their familiarity with the complexities and importance of group dynamics, the social factors that affect the structure of the learning situation, and gave them valuable practice in using teaching techniques that can help establish group control without inhibiting self-expression. With a few notable exceptions, the individual study projects of the control groups give little evidence of specifically contributing toward their development as teachers in the areas under consideration.

The basic recommendation emerging from the exploratory study — that Grouptalk training should be added to the curriculum of teachers training institutions — is supported by the student teachers' unanimous enthusiastic response to the experimental program.

Two additional conclusions are: (1) A projective test, such as the Student Teacher Incomplete Paragraph Test, is potentially useful in predicting some aspects of teaching effectiveness and (2) Previous estimates of the pedagogical value of Grouptalk for young children, thus of its value in the elementary grade curriculum, are supported. However, experience with the problems involved in introducing Grouptalk into the elementary grades during the period of a student teacher's apprenticeship suggests that alternative ways of achieving this goal would be preferable.

Further exploration is thus indicated for three separate problems: (1) What is the most effective way to introduce Grouptalk into the curriculum of a teacher training institution?, (2) What alternatives are better than using apprentice student teachers as leaders in order to make Grouptalk available for the lower elementary school grades? and (3) How can the Student Teacher Paragraph Completion Test be improved as a diagnostic instrument?

## B. PROBLEMS UNDER CONSIDERATION

This report describes an experimental addition to the teacher education curriculum at Wheelock College – the instruction of student teachers in the use of a new pedagogical small-group technique, Grouptalk, during their apprenticeship in the primary grades of an elementary school – and explores its effectiveness in terms of the teacher training objectives of the College.* The evaluation includes an assessment of the value of teaching student teachers Grouptalk technique, of the specific method used to teach it, and of giving this training during a student teacher's apprenticeship. The study is also designed to shed some incidental light on the contributions that Grouptalk makes to second graders. Finally, it introduces the possibility of developing a new story completion projective test into a tool for predicting aspects of teacher excellence.

1. Teacher Training Programs. The many contributions to the broad field of preparation for teaching may, for convenience, be categorized roughly as concerned with: (1) noninstructional skills, such as order and routine, (2) knowledge of the content of a specific discipline, American history or mathematics, for example, and (3) the more general instructional knowledge and skills associated with the role of teacher. It is with this last type as applied to the primary grades that this exploratory study deals.

Educators working in this almost limitless area of broad preparation for teaching young children have emphasized the value of a large number of different types of training. There is general agreement on the importance of increasing the prospective teacher's understanding of

*The terms 'Wheelock students', 'students' and 'student teachers' will be used interchangeably and be differentiated from the terms 'children' and 'pupils', which are equivalent. 'Cooperating teachers' and 'teachers' have the same meaning.

child development, of the range of individual differences, and of the ways in which an individual can be helped to learn. More recent and controversial developments include the belief that the beginning teacher should also know something about group process and emotional education (Rogers, 1966). A few teacher training institutions include T-Group training in their curriculum with the aim of increasing the student teacher's familiarity with group behavior, his sensitivity to others, and his self-insight and maturity. For example, the Institute for Advanced Study in Rational Psychotherapy now runs a laboratory school where its students can learn to apply the principles of rational-emotive therapy to themselves and their young charges (IASRP Newsletter, 1970). Equally new but more widely accepted than this emphasis on leadership skills is the use of discussion groups as a method of instruction in teacher preparation programs. Arthur W. Combs (1965) advocates including "learning group" discussions, as opposed to "decision groups" and devotes several pages in his book, The Professional Education of Teachers, to discussion techniques.

Student teaching experience combined with academic courses is standard procedure in teacher education. Purpel (1967) lists four general functions of the student teaching: (1) orientation, or socialization, to the world of the school, (2) providing an opportunity to begin to develop an autonomous teaching style, (3) giving the trainee an insight into the professional requirements of a teacher, and (4) operating as a laboratory where the student confronts the theoretical aspects of teaching learned in courses with data accumulated through personal experience. These functions often are not fulfilled in current training programs. Sorenson (1967) expresses the most crucial defect as a failure:

> to provide the prospective teacher with a theoretical framework for use in planning and evaluating his own instructional activities. The entire emphasis seems to be on the learning of routines for getting through the day rather than on the analysis of the reasons for or the effectiveness of these routines. (p. 177)

He suggests the need for radical change:

> Much more attention needs to be given to the teaching of a theoretical framework and to showing how that framework can be useful in guiding the day-to-day activities of the teacher. (p. 177)

A means of correcting the theory must also be taught. Sorenson hopes that the steps taken to achieve this goal will:

> reduce the anxiety and even hostility which the data suggest many student teachers experience in practice teaching, and so increase the effectiveness of teacher-training programs. (p. 177)

Training in Grouptalk technique bears upon all of these aspects of a broad preparation for teaching. After a brief description of Grouptalk,

the rationale will be given for adding it experimentally to the student teaching program of a small number of Wheelock College students.

2. Grouptalk Technique Grouptalk is a specific type of small group discussion which I devised in 1965 and described in The Grouptalk (1967), a publication now out of print, and updated in unpublished mimeographed form (Whipple, 1969). The general definition is as follows:

> Grouptalk is a taped conversation in which a leader helps a small group of people follow rules in talking together to try to answer a discussion question. (1969, p. 2)

This general definition delineates the function of the small group (the members talk together to try to answer a discussion question), the function of the leader who is not a group member (he helps them talk together), and the conditions under which the group operates (they follow rules). Instruction in Grouptalk participation and leadership makes explicit with practice the techniques the leader uses to help the group talk together and the nature of the rules it must follow. There are three categories of rules: starting, discussion, and ending rules. The starting rules emphasize the importance of clarifying the meaning of the discussion question. Discussion rules seek to elicit active and relevant participation from all members. The ending rules pertain to summarizing the discussion and evaluating its quality while listening to a taped recording of it. Both the formulation of the rules and the manner of presenting them vary according to the age level of the participants. Grouptalk is appropriate for all ages beginning at the second grade level.

Regardless of the age of the participants, the leader's function remains the same. He facilitates the group discussion, while carefully refraining from giving his own answers to the discussion question. The leader concentrates his remarks on the process rather than on the content of the discussion. Grouptalk is not a vehicle for communicating information from leader to participants. Thus, when used in a school setting, it prevents the teacher from assuming the role of information expert. The Grouptalk session teaches children how to think, not what to think. It helps them to become more effective participants in a small group discussion. It increases their self-confidence and the quality of their verbal self-expression.

How is the use of Grouptalk as a teacher training instrument related to current activities elsewhere that stress small group discussions? There is considerable overlap with T-Group training in philosophy and goal orientation — Grouptalk also increases sensitivity — but major differences are basic. Grouptalk leaders structure the group's interactions, help the participants follow rules, whereas T-Group leaders do not. This makes for important differences in the kind of learning that takes place in the two types of small groups.

Grouptalk sessions also bear some resemblance to highly structured small group discussions, developed in California for primary school children. This program calls for structured group discussions for moral ideas starting with kindergarteners. In many ways the goals

are similar to those of Grouptalk. In addition to the sensitivization and awareness of group dynamics, the student teacher learns about children's moral growth and how to influence it. But both the goal and technique of guiding moral development are quite different from Grouptalk. Furthermore, it lacks Grouptalk's emphasis on cognitive processes: specifically, learning how to define terms, to maintain relevance, and to summarize.

3. Rationale for teaching Grouptalk What would student teachers gain from learning this new technique? Instruction in Grouptalk technique, we anticipated, might make a significant contribution to the training of Wheelock College student teachers during their apprenticeship in the second and fourth areas listed by Purpel (1967) referred to above. First, it might help the students begin to develop an autonomous teaching style in a situation where 'good teaching' usually means 'teaching the way the cooperating teacher wants you to teach'. Being able to progress towards establishing their own style would add to their maturity and self-confidence in their role as teachers. Secondly, it might also help focus attention on the way in which educational theory is related to the day-to-day activities of the teacher. By increasing their understanding of how children feel, think, interact in small groups, of how these interactions affect learning, and of how they as leaders are involved in the group dynamics, Grouptalk would solidify the students' educational philosophy and make the application of theory more meaningful in the classroom.

Expectations that these results would come about were based partly on the nature of Grouptalk itself, partly on the method that would be used to train the students in the technique, but also on my previous experience in teaching students Grouptalk technique.

a. Expectations Based on Nature of Grouptalk. — The wide range of questions from which a particular one is selected for a Grouptalk discussion is an important factor in accounting for the flexibility of the technique as a pedagogical tool, for its appropriateness over an enormous age range, and also for the variety of types of gains to be made from a given session. Questions can be simple or complex, realistic or fanciful: "What kind of flower would you like to be?" (second grade), "What if there were no communication between Southeast Asis and the United States?" (fourth grade), "What contributes to a favorable student teaching experience?" (student teachers), "Has the United States reached the limit of its ability to educate its children without population control?" (staff). The Grouptalk session is particularly well suited to convey to an observant leader how children of a given age learn, think, and interact in small groups because the basic structure of Grouptalk restrains the leader from entering into the discussion of content. The teacher is constrained to listen to children's uncensored communications. He is not supposed to interrupt or direct the flow of ideas. As a consequence of being in this position, the leader has an unusual opportunity to increase, through concrete experience, his understanding of children and test the appropriateness of his philosophy of education. Grouptalk encourages children to be creative and to take responsibility for the direction of their discussions. For this reason, observation of changes in their behavior over a series of

sessions should support the view that children's learning is most effective when self-directed. At the same time, the requirement that the leader help the group maintain the discussion according to the rules of Grouptalk teaches the leader a great deal about group dynamics and techniques of group leadership. It also highlights the relationship between his actions as leader and the children's learning.

b. Expectations Based on Training Technique. — The student teachers would learn Grouptalk technique by following a procedure which we hoped would also contribute to their knowledge and growth as individuals. Before observing and leading children's sessions, they would participate in adult sessions geared to call attention to how they themselves had learned. The discussion questions used in the subsequent series of adult Grouptalk sessions would also be chosen to enhance the student teachers' self-insight and knowledge of children. The same rationale applies here as in the training of T-Group leaders and psychoanalysts, even though Grouptalk technique is considerably simpler than either of these: future practitioners must become participants first because the personal learning and growth which can take place through active exposure to the technique are necessary ingredients in the effective use of it.

Two additional features of the Grouptalk training procedure were expected to contribute to its educational significance: (1) opportunities to observe and discuss procedures followed by a trained Grouptalk leader, and (2) individual conferences which would follow as soon as possible the session that had been led to provide feedback on the student's own leadership performance. The pedagogical value of this type of critical appraisal has been experimentally documented in the studies of Dwight W. Allen, et al. (1966) on the effects of feedback and practice on the acquisition of a teaching strategy, and in the studies of Michael E. J. Orme, et al. (1966) on the effects of modeling and feedback. By the end of the term, if the Wheelock students thought they had learned how to handle small groups more effectively, an increase in their self-confidence in the teaching role would be the natural outcome of the skill they felt they had acquired in leading Grouptalk sessions. An increased sense of competence due to actual experience would match the increase in understanding that observation alone might have yielded. The training would be an example of the episode teaching method recommended by Lundy and Hale (1965).

c. Previous Experience in Student Teacher Training. — My earlier work in training student teachers to lead Grouptalks was encouraging. During the first part of the academic year, 1966-67, two Wheelock students under my direction conducted a series of twenty Grouptalks with the second graders in their classrooms. In the spring term of that year two students from another college working at the fourth grade level also learned how to become Grouptalk leaders. Their college supervisors, the staff at the Underwood School and the student teachers themselves felt that the technique had enabled them to gain rapidly new insights about themselves, the children, and their relationship to the children. Their adult Grouptalk sessions provide opportunities for growth: when the student teachers analyzed their student teaching experience they came to the decision that their master teachers had given

them adequate supervision, that it had been their own insecurities which led them to unrealistic expectations that the master teachers would provide far more specific type of guidance. Differentiating their own concerns from the children's also helped make the student teachers feel more a part of the adult world and strengthened their self-confidence in their authority roles. Listening to second graders discuss the question, "Why do we need families?" made it clear to these college seniors that the children's preoccupations with the family were drastically different from their own. Other Grouptalks led to further insights which the student teachers could relate to the classroom.

Experienced teachers also led Grouptalk sessions. They commented that the sessions helped them understand particular children better than had been possible in the classroom situation, even though their policy was to make frequent use of small group and individual teaching. Children, freed by the rules of Grouptalk from the constraint of trying to give the "correct" answer and encouraged to communicate with the other children in the group rather than with the teacher, had expressed themselves in unexpected ways. Experienced, sensitive teachers who led Grouptalk sessions saw emerge abilities and facets of personality of which they had previously been unaware, and felt they could put this knowledge to use in the classroom.

## C. METHODS

1. Selection of Subjects The exploratory study was tailored to fit into the current teacher preparation program of the College. During the sophomore year Wheelock students observe young children in either a classroom or other institution in which care of young children is involved. For ten weeks in the last part of the junior year, then again in the first semester of the senior year, the students are given more responsibility as apprentice teachers. Usually they undertake an independent study. There are conferences at frequent intervals with the cooperating teacher and the supervisor from the college to help the student teacher evaluate her classroom experience. In addition, the supervisor holds weekly seminars with her dozen or so students to take up general and specific aspects of the curriculum and to supplement what is being learned in the classroom.

Dr. Alma Bent generously agreed to incorporate the exploratory teacher training project into her unit of this educational curriculum for two successive terms. This meant a total sample of twenty students. Half of the ten student teachers in each group she supervised, or ten in all, learned Grouptalk technique during the time they were apprentices in the first, second or third grade at the Underwood Elementary School in Newton.* The control groups, the other five members in each of

*The decision to provide the Grouptalk training at this particular school was made because the technique had been developed there. Both the administration and the staff were familiar with Grouptalk and actively encouraged cooperation in a research project which would involve children's participation in Grouptalk sessions led by Wheelock College students.

Dr. Bent's two seminars, were apprenticed in grades one through three at other elementary schools in Newton having a comparable educational philosophy. This arrangement for the control groups meant they had no contact with Grouptalk – their classmates were strictly enjoined to silence and kept it – but they shared the same supervisor. They were also asked to undertake an individual study that involved working with a small group of children. Hence, in other respects, their teacher training experience was comparable. The students teachers do not represent a random selection even from the Wheelock College population. Both groups of ten students supervised by Dr. Bent were mostly girls who had elected to work in the primary grades in Newton. At the time of starting their preference they knew nothing about a research project, but, when told about it, all agreed to participate. Although assignment to the experimental and control groups was largely on the basis of ease in arranging transportation, strong student preference for a specific school assignment was honored.

To provide some check on the comparability of our experimental and control groups, I collected demographic data from each of the students on a standard form (cf., Appendix I). Additional means of assessing the equivalence of the experimental and control groups are provided by the pre-tests, described below, which formed the baseline for estimates of change during the experimental period. These data indicate that the two control groups were slightly superior in teaching competence to the two experimental groups at the beginning of the term.

2. Grouptalk Training Procedure The student teachers' first exposure to Grouptalk consisted of two adult sessions. The manner in which I initiated them suggested the model to be followed with the second graders, not the model appropriate for use with adult groups. Both the teaching technique and the discussion topic for the second session ("How are the rules of Grouptalk learned?") were intended to encourage the student teachers to think about how children's learning might be compared with their own.

Following the first two sessions, the student teachers read my 59 page mimeographed manual (Whipple, 1969), which describes Grouptalk, with particular emphasis on its use in the primary grades. The original plan – to have them listen next to tapes of previous second grade Grouptalk sessions – was abandaned because of scheduling difficulties. Instead, each student teacher's first exposure to a children's session was when she watched me lead her group (four or five children) in their first Grouptalk session. Because Grouptalk is not appropriate for children in the first grade, and a large percentage of the children in all of the third grades at the Underwood School had participated in Grouptalk sessions the previous year, we formed groups with all the children in a single second grade classroom, one to which no student apprentice in the experimental group had been assigned. Thus, for the most part, contact between the children and the student teachers was limited to the Grouptalk sessions. Soon after each of the children's first Grouptalk session, the student leader and I met in conference. Xeroxed copies of her transcription of the tape of this Grouptalk session were distributed to the other student teachers, as were transcriptions of all of the adult Grouptalks.

Thereafter, the student teachers met with their second graders for six sessions, each followed as soon as possible by a conference with me. We listened to parts of the tape, talked about the individual children, their interaction in the group, and the student teacher's leadership technique. Each week a different student teacher transcribed her tape for circulation to the others. Sometimes the transcriptions were used in conjunction with the adult Grouptalk sessions. There were seven of these, generally with topics relevant to Grouptalk procedure and classroom problems (cf. Appendix II). Except for two sessions with the first experimental group when Dr. Bent took charge, I led all adult sessions. When the student teacher had completed the series of six sessions with her group, she visited their classroom for the first time to observe the children in that situation and to collect information from their teacher about their abilities and performance. At the end of the term, armed with numerous transcriptions, tapes, instruction manual and a variety of experiences with Grouptalk, the students consolidated their learning by writing a final paper covering four topics: (1) what the individual children had learned from Grouptalk, (2) changes that had taken place in the structure of the children's group, (3) what the student had learned about children, and (4) changes that had taken place in her self-image as a teacher.

3. Control Group Assignment In order to provide parallel experience in working with small groups, Dr. Bent asked the student teachers in the control groups to undertake an individual study project in which they would "give special attention to a pre-selected group of four to five children" – an appropriate request, since she usually makes reference to small groups in her curriculum seminars. To facilitate our assessment of what the experimental groups had gained from Grouptalk, which was their special study project, the students in the control groups also undertook an activity that would enable them to write a final paper which, in addition to giving an account of their project, would answer four questions equivalent to those assigned at the beginning of the term to the experimental groups. In other words, from the beginning we emphasized the importance of the final paper, specified the topics it would cover, and tried to direct the control groups toward an individual project which would involve working with children in a small group.

4. Evaluation: Basic Assumptions The person who evaluates a teacher training project should state as clearly as possible his conception of the ideal teacher before describing the tools used to measure change. Suppose the teacher training project helps produce better teachers. Just what does 'better' mean? In what way is the person closer to being an ideal teacher? The assumptions of Sorenson and Gross (1967) are, I believe, correct:

> that a teacher may be said to be "good" only when he satisfies someone's expectations, that people differ in what they expect from teachers, and that a scheme for evaluating teachers or for predicting teacher effectiveness must take those differences into account. (p. 1)

My judgments about teachers do not intentionally relate to the three categories of expectations postulated by these authors, which they label

noninstructional variables, i.e., the teacher's relations with his superordinates, his manner and appearance, or his managerial and housekeeping skills. However, the three instructional variables which they postulate are basic to my evaluation of primary school teacher excellence, and my preference for one over another of their subcategories is clear. In terms of their categorizations, my beliefs can be stated as follows: (1) In his educational objectives, the good teacher gives "priority to such matters as the effect of the instructional process on the pupil's self-esteem or his willingness to engage in problem solving, and must avoid inducing anxiety or dislike of school." (p. 7) The acquisition of knowledge, although important, is not the only or major goal of teaching. Although the good teacher transmits social values necessary for responsible, participating citizenship, effective learning comes from facilitating personal growth rather than from teaching children to parrot social conventions. (2) To achieve his educational objective, the teacher should emphasize "the processes by means of which knowledge in a particular discipline is created" (p. 8) and subordinate the content of the discipline, adopt the "Discovery" rather than the "Didactic" role. (3) The interpersonal style of the good teacher is informal, friendly and non-punitive, rather than impersonal and rigid. I would add to their description of good interpersonal style both the dimension of clarity and consistency of demands.

My judgment of excellence in a teacher also is in harmony with the point of view expressed by Strom and Galloway (1967). They reject the aim of trying to identify the "good" teacher in favor of identifying the "better" teacher, using the teacher himself as the prime reference for judgments of self-success, i.e., the teacher's awareness of improvements in achieving his own instructional intentions. Evaluations of teacher excellence thus should also take into consideration evidence of growth on the part of the teacher toward his own ideal of the teacher's role. The tools used in this study to evaluate changes in the student teachers assume that 'good teacher' is to be defined according to these expectations.

There are three additional assumptions which affected my selection of the evaluation devices. One is that although the normal procedure for training Wheelock College students during their apprenticeship in their junior and senior years helps prepare the students to be good teachers in the above sense, it is effective to an unpredictable extent, because of the complexity of the interactions between the student's personality and ability and that of the classroom teacher. Student teaching is believed to be more beneficial when the temperament and educational philosophy of the master and student teacher are in harmony. If the student teachers in both the experimental and control groups are therefore expected to show unpredictable degrees of change in the same direction – presumably all girls would show some improvement as a result of their apprenticeship – then the effect of Grouptalk training could be detected only by especially sensitive measuring tools. Standard quantitative tests probably would be inappropriate. New ones would have to be devised.

Although direct measurements of teaching ability, would have been enormously useful, such as might have been obtained by observations

of the student teachers in their first year of teaching, follow-up studies of this type were out of the question. I assume, therefore, that in evaluating the addition of Grouptalk training to the curriculum 'contributes to teacher preparation' means 'improves the teaching potential of a student', which is not necessarily synonomous with 'affects student teacher performance', although one anticipates there would be a high correlation between improved potential and excellence in performance in subsequent years. Furthermore, it is clearly inappropriate to assume that one can make reliable judgments of teaching ability when it is demonstrated by conducting a lesson in a master teacher's classroom. My measuring tools thus include intuitive projections based on my estimates and the students' self-estimates of change in teaching potential, in addition to the cooperating teachers' and Dr. Bent's ratings of teaching potential and performance in the classroom.

The final assumption of the evaluation procedure is that no single valid objective test of teaching potential or excellence exists or can easily be devised with the sensitivity requisite for our purposes. Bjerstedt (1967), who is in the process of constructing a battery of better tests based on an interaction-oriented approach, comments:

> The difficulty of predicting teaching effectiveness has been well known among educational research workers for a long time, and the amount of research directed at this problem has been impressive. Unfortunately, the results emerging from this research have been less than impressive and, in many cases, of no practical value at all. (p. 339)

Therefore, I have relied on a battery of five highly subjective measurements and one objective type. The appropriate statistical analyses are simple and descriptive. I have not calculated significant differences because the data do not warrant such attempted precision and to do so would be misleading.

The selection of the tools for evaluating the project clearly exemplifies the well known tendency of social research to yield conclusions that support the biases and value judgments of the experimenter. In his characterization of all social research, Muzafer Sherif (1970) concludes, "In effect, the researcher stages his own scenario." (p. 146) But by making his biases as explicit as possible, the experimenter can often help others achieve an independent evaluation. I hope the presentation of this report will enable the reader to reach his own conclusions about the value of instruction in Grouptalk as a teacher training instrument.

In short, in trying to answer the question, Does Grouptalk training help make better teachers? we assume agreement on the meaning of 'good teacher' and we also assume a high correlation between teaching potential and teaching ability. Finally, we assume that classroom teaching ability (observable only after graduation when the student has a class of her own) is a function of teaching potential plus experience and that supervised classroom teacher training during the term of apprenticeship can contribute to both. The evaluation tools needed for this project therefore must be able to pinpoint what Grouptalk adds to a student teacher's teaching potential and experience, as distinct from

what other apprentice learning situations contribute. It does not help to measure the anticipated growth in teaching potential between the beginning and the end of the term. We must be able to measure the specific change which Grouptalk makes in the overall growth in teaching potential.

5. Evaluation: Procedure Followed Since Grouptalk, although broadly classified as a language arts study, does not teach content, we can exclude from the outset measures of proficiency in subject matter. We can also exclude measures of teaching potential which rely heavily on basic personality factors, because Grouptalk training does not affect these. Instruments were chosen which measure changes: (1) in the student teachers' educational objectives, (2) in their teaching techniques, and (3) in their teaching styles.

Six different types of data, described below in detail, were collected to help evaluate the contribution made by Grouptalk training to the student teachers' preparation. The final paper which all of the students wrote about their special project I considered the most important single source of information. In addition, all of the girls took two tests: Freeze's College Student Problems Q-sort (cf., Appendix III) and Whipple's Student Teacher Paragraph Completion Test (cf., Appendix IV) before beginning their ten weeks' student teaching experience and again on the last day of the term. The cooperating teachers and Dr. Bent, using the form in Appendix V, rated the students at the end of their first week in the classroom on their expected performance as student teachers and then rated them again on performance during the latter part of the student teaching experience. Ratings on Grouptalk leadership provided a fifth source of data. I rated the students first on the basis of performance in the first Grouptalk session which they led, then again on the quality of leadership shown in their last sessions with the same children. The dimensions of rating are described in Findings, D. (All of the ratings reported in this study are on a five point scale from a low of one to a high of five). Finally, the content of many of their adult Grouptalk sessions was examined for changes in the experimental groups' thoughts and feelings about teaching.

a. Final Paper. — All students knew at the beginning of the term that the special project for Dr. Bent's course would involve writing a final paper. The girls in the experimental groups were told that their paper should answer four questions: (1) What do you think the individual children in your group have learned from their participation in Grouptalk?, (2) What changes took place in the group relationships from the children's first to their last sessions?, (3) What has the Grouptalk project contributed to your understanding of children?, and (4) Are there changes in your self-image as a teacher that you can attribute to your experience with Grouptalk?

Since the students in the control groups each pursued an individual study in their own classrooms, they were asked first to describe the nature of their special project, then to answer four basically equivalent questions. Both Dr. Bent and I explained the assignment at length when handing out the mimeographed instructions and again several

times just before the students began writing their final papers, making every effort to ensure coverage of the four areas in which the groups would be compared.

The first topic, What did the children learn from the special project? was included for two reasons: primarily because it encouraged the student teacher to focus on the individual child and his potentialities, but also because I thought the study could be used to support previous impressions of the pedagogical value of Grouptalk training for children at the second grade level. The experimental group, I hoped, would mention affective as well as cognitive aspects of children's learning, regardless of whether or not they thought changes had occurred.

The second area of concern — changes that took place in group relationships — would be handled quite differently, I anticipated, by the experimental and control groups. The student teachers in the experimental groups would look at group dynamics quite closely and describe the children's interactions with a sensitive understanding of factors leading to the degree of cohesion that had been achieved. The control students, on the other hand, would show less interest in and understanding of group dynamics. Furthermore, whatever evidence might be available would indicate less awareness of specific ways in which a group leader's behavior affects children's interactions.

It might be harder to evaluate statements about what students' projects had contributed to their understanding of children. Presumably, everyone would say that they learned something. The very nature of the writing assignment might even lead them to exaggerate a little. Yet I very much hoped that careful reading of the final papers would enable the reader to separate fact from fiction. If the Grouptalk experience had its anticipated effect, there would be more emphasis in the experimental groups on developmental characteristics of the particular group observed — they would feel they knew more than they had previously about the thoughts, feelings and capacities of children of that particular age.

Small changes in the student teachers' self-image in the direction of greater self-confidence were anticipated in both the experimental and control groups. Their individual projects had given them all the opportunity to take the responsibility of teaching a small group of children and, as a result, one would expect the teacher's role to seem more natural. But, hopefully, the instruction in Grouptalk technique would make a larger contribution in this respect. It would also, I expected, make a qualitative difference: the student teachers in the experimental groups would be much more inclined than previously to see themselves in the role of teacher as a resource person rather than as a dispenser of information and facts, and more apt to place a high value on small group discussion, particularly when peer-oriented.

b. Adult Grouptalk Sessions. — Since the discussion question selected for six out of the seven adult Grouptalk sessions in both experimental groups related in some fashion to teaching (cf. Appendix II), much of the content of these sessions is relevant to an assessment of what the student teachers gained from their Grouptalk training. No

comparisons can be made with comparable discussions among the students in the control groups for none were held. But the transcripts of the adult sessions serve as an additional source of information, which should corroborate the conclusions reached from reading the final papers of the experimental groups. Discussion of the question, "What has Grouptalk taught you about children?" for example, would be expected to cover some of the same ground as the students' treatment of the topic, "What has the Grouptalk project contributed to your understanding of children?"

c. Ratings of Grouptalk Leadership. — On the basis of listening to tapes — I was never present while the student teachers led their sessions with the children — I derived a score for Grouptalk leadership performance (cf., Findings, D). This overall rating on a five point scale (poor to excellent) is the average of the ratings assigned on six variables, each of them rated on a five point scale.

My expectation was that all students would improve in their ability to lead Grouptalks as a result of increased familiarity with the technique, that their ratings at the end would be higher than at the beginning — even though the skill involved in leading the sixth session successfully is greater than that required for leading the second. Admittedly, the skill gained in leading a particular type of small group discussion — Grouptalk — might not necessarily have a direct bearing on classroom management. But presumably, it would be a step in the right direction: at least the student teacher should be better prepared to lead small group discussions in the classroom.

Some learning, I anticipated, would not be reflected in these leadership ratings. It is important to remember that they are ratings of actual performance in leading groups of varying degrees of difficulty. Significant learning could result from having a difficulty group which the student teacher could not handle effectively.

d. Student Problems Q-sort. — This test devised by Freeze (1963) provides a validated measure of openness to experience, a variable presumably related to teaching excellence in the sense in which it is understood here. After Rogers postulated a personality continuum from "closedness to experience" to "openness" and showed that this variable was related to successful therapy, several investigators explored the usefulness of the concept in the field of education. Bills, et al. (1964) summarize these efforts:

> There appear to be direct relationships between the openness of a teacher to his experience, both past and present, his judged teaching success, his effect on attitudes toward self and others of pupils, the locus of responsibility for decision making within his classrooms, his ability to change in a learning situation, and the quality of the helping relationships he offers pupils. (p. 1)

Bills and his co-workers continued the research first reported by Freeze on changes in openness scores of student teachers before and after their student teaching experience and found, as he had, that significant

negative change occurs during this period. This undesirable result is interpreted as a function of tension producing aspects of the student teaching situation. Bills, et al., suggest a variety of ways these tensions might be alleviated, many of which coincide with the conditions present during Grouptalk training. It therefore seemed worthwhile to investigate the relationship between openness scores and Grouptalk training, and include, as the previous investigators had done, Q-sort scores of the cooperating teachers (cf., Appendix VII). Use of these tests could provide a relatively clear-cut, objective way of documenting one possible contribution of Grouptalk to the Wheelock teacher preparation program: a reduction of some of the tension producing aspects of the student teaching situation.

e. Teacher Ratings. — The rating form set up for the project (cf., Appendix V) consists of three parts: (1) a list of personality traits and abilities said to be associated with excellence in female teachers (Gough, Durflinger, and Hill, 1968), (2) skills related to Grouptalk leadership, and (3) an overall assessment of the student teacher's performance in the classroom. All ratings are on a five point scale. Because I differentiated characteristics that were and were not expected to be influenced by Grouptalk training, I hoped that the ratings in categories (2) and (3), made at the beginning and at the end of the training experience by Dr. Bent and the cooperating teachers (especially if there were close agreement between the paired judgments), would help demonstrate the contribution of Grouptalk to the student teacher's preparation. The additional ratings that Dr. Bent and the cooperating teachers made of the student teachers' teaching ability, using the standard Wheelock and Newton Public School forms, could provide some check on reliability. Clearly, however, even highly reliable data would have to be interpreted with caution: the final ratings are based on observations of performance before the special Grouptalk training had been completed. Also, since the teaching was done in the cooperating teacher's classroom, the performance was not always the student's best: some of them felt obliged to conduct the lesson in accordance with the teacher's wishes and not as they would in their own classroom.

f. Student Teacher Paragraph Completion Test. — This unstandardized projective test (cf., Appendix IV) was designed to measure student teacher's beliefs and feelings in the area of teaching that might be affected by exposure to Grouptalk technique. It consists of five incomplete paragraphs describing a hypothetical situation in an elementary school. The student teacher is asked to finish them: "State how you think you would feel in that situation, the thoughts you might have and the actions you might take." There are two ways of scoring the responses. One method of scoring yields quantitative ratings on a five point scale on one or two dimensions for each of the five incomplete paragraphs. This means that group comparisons can be made on initial attitudes and beliefs as well as on changes for each of the dimensions rated. The second method of scoring, based upon a comparison between the content of the responses of an individual before and after the student teaching experience, results in an individual profile rich in information but not amenable to use in group comparisons.

If we assume this projective test does provide sensitive, valid measures, and Grouptalk training does accelerate the growth process towards becoming a good teacher, then we would expect to find greater differences between the test and re-test protocols of the experimental than of the control groups, i. e., more evidence of growth. In the commitment to teaching there would be more emphasis on reality, less on idealistic factors, more security in the authority role. The objectives of teaching would be stated more clearly and concretely in terms of the development of individuals within a group context. The teacher would be seen more as a resource person, less as a dispenser of factual knowledge; as a person who gives structure to the classroom in a non-punitive way. Finally, awarness of thoughts and feelings of others would also increase more.

g. Subjective Assessment. — It was our anticipation from the outset that in the final analysis Dr. Bent and I, and hopefully the reader also, would intuitively weigh results from the various types of data described above to arrive at firm and similar conclusions about the usefulness of Grouptalk technique as a teacher training instrument.

## II. FINDINGS

Six different types of data, as we have seen, are relevant to the central question posed in the exploratory study, Does training in Grouptalk technique add significantly to the preparation of student teachers? The presentation of the findings begins with the more objective, albeit less informative, sources of information, and ends with the student teachers' final papers, which communicate the most. The most convincing way to report the data certainly would be in terms of individual profiles. The effect of introducing Grouptalk training is seen most clearly in case histories which can take into account all the complexities of the student teaching situation. However, this method of presentation with a sample as small as ours, would trespass on the student teachers' rights of privacy. I have carefully kept the anomymity of the students protected at the expense of optimal presentation of the data by assigning different numbers to the students in each of the following sections, making it impossible to trace individual profiles.

### A. STUDENT PROBLEMS Q-SORT

Freeze's Student Problems Q-sort, which yields openness scores for student teachers, presumably measures a quality of personality correlated with teaching excellence and mental health. It was my hypothesis that any clear cut variation from the findings of previous investigators, i.e., that openness tends to decrease during student teaching, would indicate the value of the teacher training procedures followed at Wheelock College by reducing anxiety associated with student teaching. Furthermore, if there were differences between the experimental and control groups, this would provide some basis for evaluating the effectiveness in reducing anxiety of adding Grouptalk training to the student teaching program.

At the outset, the experimental and control groups differ only slightly in openness — +18.4 versus +20.6. Both groups are moderately high in openness on a scale which ranges from -64 to +64 (cf. Table 1). The junior control students have a higher average score (+21) than the junior experimental group (+12.2), but the relationship is reversed for the seniors (24.6 for the experimental group versus 18.2 for the control students).

Unfortunately the data on differences on Q-sort scores before and after student teaching do not yield clear cut results, as inspection of Table 2 shows. The average change is positive for one experimental group (+3.0), negative for the other (-5.3). The same is true for the two control groups (-3.8 and +7.4). The variability is high in all four. A tendency toward positive changes in the control groups and toward negative changes in the experimental groups might be inferred if we could remove from consideration the two students who have an extremely large difference in the pre-teaching and post-teaching test scores (+30 and -18). But what reasonable justification is there for doing this?

TABLE 1. — Q-Sort Scores of Student Teachers in Experimental and Control Groups at Start of Student Teaching

| Experimental group | | Control group | |
|---|---|---|---|
| Student | Q-sort score | Student | Q-sort score |
| Group I (juniors) | | | |
| #1 ..... | 8 | #11 ..... | 4 |
| 2 ..... | 25 | 12 ..... | 27 |
| 3 ..... | 23 | 13 ..... | 17 |
| 4 ..... | 14 | 14 ..... | 32 |
| 5 ..... | - 9 | 15 ..... | 25 |
| Average ..... | +12.2 | | +21 |
| Group II (seniors) | | | |
| #6 ..... | 38 | #16 ..... | 15 |
| 7 ..... | 23 | 17 ..... | 27 |
| 8 ..... | 25 | 18 ..... | 32 |
| 9 ..... | 22 | 19 ..... | 6 |
| 10 ..... | 15 | 20 ..... | 11 |
| Average ..... | +24.6 | | +18.2 |
| Average (I and II) | +18.4 | | +20.6 |

TABLE 2. Changes in Openness Scores of Student Teachers After Ten Weeks' Student Teaching

| Experimental group | | Control group | |
|---|---|---|---|
| Student | Change in openness score | Student | Change in openness score |
| Group I (juniors) | | | |
| #1 ..... | - 4 | #11 ..... | + 1 |
| 2 ..... | - 7 | 12 ..... | + 1 |
| 3 ..... | - 5 | 13 ..... | + 2 |
| 4 ..... | + 1 | 14 ..... | -18 |
| 5 ..... | +30 | 15 ..... | - 5 |
| Average ..... | + 3.0 | | - 3.8 |
| Group II (seniors) | | | |
| #6 ..... | - 8 | #16 ..... | + 8 |
| 7 ..... | + 6 | 17 ..... | +15 |
| 8 ..... | -11 | 18 ..... | + 2 |
| 9 ..... | -10 | 19 ..... | + 1 |
| 10 ..... | - 3 | 20 ..... | +11 |
| Average ..... | - 5.3 | | + 7.4 |
| Average (I and II) | - 1.2 | | + 1.8 |

It is interesting to note in passing that almost all of the Wheelock students in both the experimental and control groups in the two testing situations indicate extremely low concern with nagging and pressure from their parents to make good grades, but classify the following items as extremely pressing problems:

#38. Learning what is most important for me to do, to be, or to get from life.
#63. Continuing to learn more about myself and what is important to me.
#66. Growing in my abilities to evaluate my needs.

It is tempting to conclude from the Q-sort data that the Wheelock College student teacher training program does not influence emotional maturity. I would prefer to conclude either that because we are dealing with such a small sample, both the raw scores and group averages are misleading, or preferably that the validity of the test is questionable.

Close examination of individual item changes shows enormous variability for all twenty students. These changes are not reflected in the final scores, however, because they cancel out. Almost a third of the 84 items change in sign value (open to closed, or vice versa); nine of these are migrations from one extreme end of the Q-sort to the other. These changes indicate either that something important has happened, that the students' perceptions and problems have indeed been affected by their student teaching experience even though no other evidence for this exists, or else that the test does not give reliable measures. It is also possible that the population on which it was standardized differs markedly from ours.

Whatever the reason, conclusions drawn from the Student Problems Q-sort must remain inconclusive. It is therefore futile to relate changes in openness scores of student teachers to those of their cooperating teachers, as we had anticipated doing (cf., Appendix VII).

## B. TEACHER RATINGS

The ratings which Dr. Bent made at the beginning and end of the student teaching experience of each of the twenty student teachers, using the rating form in Appendix V, provide a numerical evaluation of their performance as student teachers and their teaching potential. Her ratings assure more uniformity in frame of reference for the judgments than use of the cooperating teachers' ratings would supply. There is a high degree of correspondence between the two, however. Analysis of the relationship between them leads to the conclusion that Dr. Bent's ratings are more suitable for this study and perhaps have higher validity – divergence between the two is greater at the beginning than at the end, with shifts in the ratings of the cooperating teachers going in the direction of Dr. Bent's.

1. Beginning Status What then do her ratings show? Ratings made at the end of the first week of student teaching are helpful in assessing the equivalence of the experimental and control groups. Although her

initial impressions indicate that the two groups were similar on ratings of isolated traits, e.g., affectionate, logical, etc., on more global characteristics, e.g., resolute in pursuing goals, open to new experience, ability to guide small groups, etc., and on the overall ratings of probable performances as student teachers and teachers (cf., Table 3), the two control groups are slightly higher in both categories. This slight initial superiority in the teaching potential of the control group also shows up in other comparisons between the groups, such as confidential ratings by the cooperating teachers on "Beginning Status" on the "Student Teachers Progress Report" for the Newton Public Schools.

TABLE 3. — Supervisor's Ratings of Student Teachers after one Week of Student Teaching on Probable Performance as Student Teachers and Ultimate Teaching Potential

| Experimental group | | | Control group | | |
|---|---|---|---|---|---|
| Student | Probable practice teaching performance | Ultimate teaching potential | Student | Probable practice teaching performance | Ultimate teaching potential |
| Group I (juniors) | | | | | |
| #1 ..... | 4 | 4 | #11 ..... | 4 | 4 |
| 2 ..... | 4 | 4 | 12 ..... | 4 | 4 |
| 3 ..... | 3 | 3 | 13 ..... | 4 | 4 |
| 4 ..... | 4 | 4 | 14 ..... | 5 | 5 |
| 5 ..... | 4 | 4 | 15 ..... | 3 | 4 |
| Average ..... | 3.8 | 3.8 | | 4.0 | 4.2 |
| Group II (seniors) | | | | | |
| #6 ..... | 4 | 4 | #16 ..... | 5 | 5 |
| 7 ..... | 3 | 3 | 17 ..... | 2 | 3 |
| 8 ..... | 3 | 3 | 18 ..... | 5 | 4 |
| 9 ..... | 5 | 4 | 19 ..... | 5 | 5 |
| 10 ..... | 4 | 4 | 20 ..... | 4 | 4 |
| Average ..... | 4.0 | 3.6 | | 4.2 | 4.2 |

2. Effect of Student Teaching What do the ratings tell us about the student teachers' progress during their apprenticeship? Dr. Bent's initial ratings provide a useful baseline for measurements of change, since she rated the students again at the end of the term.

Ratings on isolated personality traits changed, but very little, indicating either that the student teachers changed in their behavior somewhat or were seen in a slightly different light after further observation. Since these changes occur in the ratings for all four groups and are small, they can be disregarded as irrelevant to evaluations of Grouptalk training. Indeed, the construction of the rating form was predicated on the assumption that these isolated personality traits would not be influenced by the student teaching experience.

Changes in ratings of global personality characteristics, which had been included because they might indicate an effect of Grouptalk training, are indicated in Table 4. The data make it clear that there is no overall difference that can be attributed to Grouptalk training: the average gain of the experimental groups (+0.5) is close to that of the control groups (+0.4). Even on "ability to guide small groups" the gains are the same for the experimental and the corresponding control groups (+1.4, +1.2, and +0.8, +0.8).* The juniors in both groups on the average gained more (+0.8 and +0.5) than the seniors (+0.2 and +0.3), a not unexpected finding. However, it is somewhat puzzling to find negative scores, i.e., lower ratings at the end than at the beginning of the term. Comparison with similar ratings on the Newton Public School forms, where "Initial Status" and "Present Status" are checked simultaneously at the end of the term, suggests that the findings are misleading — some teachers indicated on the Newton form that there had been no progress, but none said the student teachers retrogressed!

TABLE 4. — Average Group Scores and Gains on Ratings of Six Global Personality Characteristics After Student Teaching

| Global personality characteristic | Experimental group | | | | Control group | | | |
|---|---|---|---|---|---|---|---|---|
| | I Juniors | | II Seniors | | I Juniors | | II Seniors | |
| | Score | Gain | Score | Gain | Score | Gain | Score | Gain |
| 1. Open to new experience | 3.4 | +0.4 | 3.2 | -0.2 | 3.2 | -0.2 | 4.2 | -0.2 |
| 2. At ease with children | 3.6 | +0.8 | 3.6 | +0.4 | 3.6 | +0.4 | 4.6 | -0.2 |
| 3. Ability to guide small groups | 3.0 | +1.4 | 3.0 | +0.8 | 2.6 | +1.2 | 3.6 | +0.8 |
| 4. Appropriateness of demands on ... | 2.6 | +1.0 | 3.0 | 0 | 3.0 | +0.6 | 3.8 | +0.6 |
| 5. Helps children take responsibility for ... | 3.0 | +0.6 | 3.0 | 0 | 2.6 | +0.6 | 3.6 | +0.2 |
| 6. Consistency in management | 2.6 | +0.6 | 2.8 | +0.2 | 2.8 | 0 | 3.6 | +0.6 |
| Average score<br>Average gain | 3.0 | +0.8 | 3.2 | +0.2 | 3.0 | +0.5 | 3.9 | +0.3 |
| Average gain (Exper.vs.Control) | +0.5 | | | | +0.4 | | | |

*In this connection it is important to state that comparisons between what the cooperating teachers of the experimental and control groups wrote in their qualitative comments on the Newton Public School form for rating student teachers suggests a different picture, i.e., that many students in the control groups were more in need of group leadership skills than in the experimental groups.

Because of the nature of the rating task, the findings are ambiguous. We could conclude that rating these global characteristics was a difficult task when there was little evidence to rely on at the beginning of the term; but perhaps the final ratings would have been different had the initial ratings been available for comparison at the end of the term.

What about differences in anticipated performance as student teacher (rated at the beginning) and actual performance (rated at the end of the term)? Table 5 shows that the average performance in all four groups is not quite as good as Dr. Bent had expected it to be. Nine of the 20 student teachers did not do as well. Only three of the 20 students, two of them in the experimental groups, did better. The predictions assumed a certain degree of uniformity in the classroom situation. But some cooperating teachers were absent for long periods and several juniors were heavily preoccupied with college obligations associated with campus political unrest. Many factors could account for these differences between predicted and observed performance in the student teaching situation in addition to inadequate observations on which to base the predictions and unanticipated student growth.

TABLE 5. – Differences in Supervisor's Ratings of Anticipated and Actual Performance in Student Teaching*

| Experimental group | | Control group | |
|---|---|---|---|
| Student | Difference | Student | Difference |
| Group I (juniors) | | | |
| #1 ..... | 0 | #11 ..... | -1 |
| 2 ..... | -2 | 12 ..... | 0 |
| 3 ..... | +1 | 13 ..... | -1 |
| 4 ..... | 0 | 14 ..... | 0 |
| 5 ..... | -1 | 15 ..... | 0 |
| Average difference | -0.4 | | -0.4 |
| Group II (seniors) | | | |
| #6 ..... | -1 | #16 ..... | 0 |
| 7 ..... | 0 | 17 ..... | +2 |
| 8 ..... | +1 | 18 ..... | 0 |
| 9 ..... | -2 | 19 ..... | -2 |
| 10 ..... | -1 | 20 ..... | -2 |
| Average difference | -0.6 | | -0.4 |

*Differences between Supervisor's ratings at end of one week and 10 weeks are positive if the second rating was higher.

The shifts in the ratings of teaching potential are of greater interest because the direction was unanticipated (cf., Table 6). Seniors, on the average, are not rated as highly at the end of the term as they were at the beginning. Four of the ten students in the experimental group and two in the control group have lower ratings. Again, it is difficult to interpret these data as indicating less actual competence at the end of the period of student teaching than at the beginning. Perhaps there was

too much ambiguity in my request to rate "ultimate performance as a teacher" and perhaps the final ratings should have been made with the initial ones available for comparison.

TABLE 6. — Differences in Supervisor's Ratings of Teaching Potential before and after Student Teaching*

| Experimental group | | Control group | |
|---|---|---|---|
| Student | Difference | Student | Difference |
| Group I (juniors) | | | |
| #1 ..... | +1 | #11 ..... | 0 |
| 2 ..... | -1 | 12 ..... | 0 |
| 3 ..... | +1 | 13 ..... | 0 |
| 4 ..... | +1 | 14 ..... | 0 |
| 5 ..... | 0 | 15 ..... | 0 |
| Average difference | +0.4 | | 0 |
| Group II (seniors) | | | |
| #6 ..... | -1 | #16 ..... | 0 |
| 7 ..... | 0 | 17 ..... | +1 |
| 8 ..... | +1 | 18 ..... | 0 |
| 9 ..... | -1 | 19 ..... | -1 |
| 10 ..... | -1 | 20 ..... | -1 |
| Average difference | -0.4 | | -0.2 |

*Difference is positive if second rating was higher.

Another ambiguity concerns the comparability of juniors and seniors on this scale. For juniors, did the rating take into account the additional ten weeks period of apprenticeship they would have when they were seniors? Can one take into account the "average amount of progress expected" and make it mean the same thing for juniors and seniors? Another source of data suggests that this is inadvisable: the Newton Public Schools ask for ratings of the student teacher's readiness to teach on her own. In this context, the junior experimental group rate a little below average (2.8) and the control group a little above average (3.2). The senior groups are about the same (3.6 and 3.8), but both slightly higher than the junior groups.

'Teaching potential' and 'readiness to teach' clearly mean something different — but one would not expect a rating on either to go down after a ten week student teaching period! Since it is extremely difficult to make predictions on the basis of one or two observations at the beginning of a student's apprenticeship, perhaps Dr. Bent's judgments at the end of the term should be considered more valid. In general, Dr. Bent's confidence in her ratings was higher at the end of the term than at the beginning, as Table 7 shows. But her confidence increased mainly with regard to rating the two control groups (+0.8 and +0.6). At the end of the term, Dr. Bent is slightly less confident in rating both experimental groups (-0.6 and -0.2) than she was at the outset. Half student teachers in the experimental group are rated with less assurance at the end than at the beginning.

TABLE 7. — Supervisor's Confidence in her Ratings of Students before and after Student Teaching on Ultimate Teaching Potential*

| Student group | Supervisor's average confidence rating | | | | | |
|---|---|---|---|---|---|---|
| | Experimental group | | | Control group | | |
| | Before | After | Difference | Before | After | Difference |
| I (juniors) | 3.6 | 3.0 | -0.6 | 3.4 | 4.2 | +0.8 |
| II (seniors) | 2.8 | 2.6 | -0.2 | 2.8 | 4.4 | +1.6 |
| Average difference | | | -0.4 | | | +1.2 |

*Difference is positive if second rating was higher.

To summarize: two control groups, initially rated somewhat higher in teaching ability than the experimental groups, finish with ratings quite similar to the ones they had at the beginning. One experimental group is rated more highly after student teaching, the other has lower ratings on the average. But the rater's confidence in her judgments of the experimental groups is still low at the end, in contrast with the increased confidence she has in her ratings of the control groups. The quantitative data thus make it difficult to draw any conclusions about the effect of the experimental procedure on teaching potential. In fact, none of the data on ratings are sufficiently unambiguous to be useful in evaluating the exploratory study.

## C. STUDENT TEACHER PARAGRAPH COMPLETION TEST

Before and after the period of student teaching, five paragraphs (cf., Appendix IV) were presented to the students to complete in the expectation that the answers would be useful in assessing attitudes about and perceptions of the teaching situation. Since there was insufficient time to conduct preliminary tests with the Student Teacher Paragraph Completion Test, there was no assurance that it would be discriminating. Responses were scored on seven variables relevant to changes in attitude that might be produced by Grouptalk training. Assuming that the projective test was discriminating, I hoped that this analysis of the data would help answer the following questions: Would the experimental group show greater sensitivity to group dynamics, greater understanding of how to motivate children to learn, place more emphasis on the importance of children's discussions, especially peer-oriented ones? Would there be a greater degree maturity in these students' preception of their role as teacher? Would their views on classroom management change more?

1. Group Differences Two incomplete paragraphs, i.e., IP #2 and IP #4, yield no useful information about group changes. Most of the students in both of the experimental and control groups completed IP #2, about motivating children to learn, in much the same manner. Their opinions did not shift with time. IP #4, about reasons for teaching, led to such a wide variety of answers that no useful dimension of

analysis was applicable to all. The other three incomplete paragraphs, i.e., #1, #3 and #5, were helpful in detecting changes of opinion and did yield interesting group differences.

a. Incomplete Paragraph #1. — This paragraph begins as follows:

> A teacher with many years of experience in the classroom told her young apprentice to be very careful from the beginning not to let the second graders get the upper hand, "They cannot be trusted. Most of them enjoy scheming to embarrass or destroy you."* The student teacher considered this advice .....

Responses to this incomplete paragraph are scored on two dimensions: (1) sensitivity to the complex group dynamics in the situation — the interrelationships between the student teacher, the children, and the cooperating teacher, and (2) the student teacher's confidence in her own philosophy of education.

Table 8 shows that in the experimental groups there were altogether 12 shifts out of 18 possible positive shifts in attitude and only one negative shift, whereas in the control groups there were only three positive out of 16 possible positive shifts and two negative ones. No students in the control groups increased their scores on both variables, whereas four did in the experimental groups.

TABLE 8. — Final Ratings and Differences in Ratings after 10 Weeks in Responses to Incomplete Paragraph #1 — Scored for Sensitivity and Confidence*

| | Experimental group | | | | Control group | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Sensitivity | | Confidence | | Sensitivity | | | Confidence | |
| Student | Rating | Diff. | Rating | Diff. | Student | Rating | Diff. | Rating | Diff. |
| Group I (juniors) | | | | | | | | | |
| #1 ..... | 4 | +3 | 4 | +3 | #11 ..... | 4 | 0 | 4 | +4 |
| 2 ..... | 5 | +1 | 4 | 0 | 12 ..... | 1 | 0 | 1 | 0 |
| 3 ..... | 1 | 0 | 4 | 0 | 13 ..... | 1 | 0 | 5 | 0 |
| 4 ..... | 1 | 0 | 4 | +1 | 14 ..... | 4 | 0 | 2 | 0 |
| 5 ..... | 5 | 0 | 5 | 0 | 15 ..... | 5 | 0 | 2 | 0 |
| Average final rating | 3.2 | | 4.2 | | | 3.0 | | 3.4 | |
| Average difference | | +0.8 | | +0.8 | | | 0 | | +0.8 |
| Group II (seniors) | | | | | | | | | |
| #6 ..... | 3 | 0 | 5 | +1 | #16 ..... | 1 | 0 | 2 | 0 |
| 7 ..... | 3 | +2 | 5 | +1 | 17 ..... | 1 | 0 | 4 | 0 |
| 8 ..... | 1 | -1 | 3 | +2 | 18 ..... | 4 | -1 | 4 | 0 |
| 9 ..... | 5 | +4 | 5 | +1 | 19 ..... | 5 | 0 | 4 | 0 |
| 10 ..... | 4 | +1 | 5 | +1 | 20 ..... | 2 | -3 | 4 | +1 |
| Average final rating | 3.2 | | 4.6 | | | 2.6 | | 3.6 | |
| Average difference | | +1.2 | | +1.2 | | | -0.8 | | -0.2 |

*Difference is positive if second rating was higher.

*The quotation is typical of letters of advice to beginning teachers found in a professional journal.

The following excerpts from two students' first and second protocols illustrate the change that was noted in the responses of five student teachers in the experimental group, i.e., increased sensitivity to group dynamics and the teacher's role in structuring situations that lead to trust:

Student # 7: In my teaching experiences I have found that children are open, honest, trustworthy, sincere, and have an innate hunger for knowledge. (First IP #1)

I have a strong belief that children can be trusted. However, this trusting of children does not mean a lack of your presence in establishing limits. Children need guidance, a sense of direction, and most important a feeling of security and fairness with a teacher. They want and need to feel a control and a trust. I think if you approach children with this attitude there would never be a situation of scheming or desire to destroy you. There would be a sense of mutual love, respect and understanding — on the part of the teacher and children. (Second IP #1)

Student #10: I won't let them get out of hand. I have always been a friend to children and feel that if I respect them, they will me ..... It has worked in the past and I would like to let my philosophy work for me in this class if it is all right with you. (First IP #1)

The student told her teacher that she realized that it was very important for the children to understand that what she says, she means and to establish her form of discipline from the start so that the children do not become confused as to what behavior is acceptable and what isn't. However, she also stated that she does think that they can be trusted if they have an understanding as to how she operated and if so, joined by the respect and friendship between herself and the students, they will have no cause to destroy her.

She tried to follow this up with conferences, etc., to try and understand why this teacher felt the way she did. (Second IP #1)

Other excerpts illustrate increased confidence in the student's own capacity to establish good relationships with children:

Student #8: The advice was a very upsetting comment for the beginning of an experience ..... I would attempt to be objective and make my own conclusions about the class, but I'm sure her comment would, unfortunately, remain in the back of my mind. (First IP #1)

I would question the validity and more important the motivation for her statement, and why she felt this was happening to her. In the beginning I might have this in the back of my mind yet I would attempt to not prejudge on her

personal experience. I would handle it as a new experience and assess their reaction to me as a teacher. I would hope to pretty much ignore this and make my own decision and observation. (Second IP #1)

These changes, so prevalent in the experimental groups, hardly occur in the control groups. Only two students in the control groups made a positive shift in one dimension, self-confidence:

Student #11: At first I might feel afraid of the children and wonder if I could be firm enough to get control of the classroom. On thinking about what the teacher had said some more, it would probably occur to me that she was a very hardened teacher and was being awfully harsh toward the children. I would think it best to be cautious when the teacher is around. She would probably not be happy at all if I became friendly with the students as that would make me seem to be against her. I would have to watch the class in action but would probably feel sorry for the children who had this harsh teacher. As much as possible I would observe closely the actions and facial expressions of the children in the first couple of times I was in the classroom, and I would have to try hard to work with the teacher and not to antagonize her until I understood the situation more fully. (First IP #1)

This teacher must be very insecure in her dealings with her children. Children can be trusted if they are given responsibility right from the beginning. Children are very frank and usually honest so that they may well at times embarrass you, but, often times, they can see a teacher's dishonesty behind it. This teacher will probably be a hard person to work with as she will probably be on the defensive with a student teacher who develops any rapport with the children; at the same time, the children probably need a good deal of understanding so that they can realize that a teacher can be a friend and is in the classroom to help them. (Second IP #1)

The second student whose self-confidence increased, (#20), seems, however, to have less concern at the end of her practice teaching for how the cooperating teacher would respond to her:

Student #20: I would be rather frightened by the idea of teaching in this classroom. It seems as if the teacher is more involved with controlling the class rather than teaching them or knowing them. I would feel though that I would have to not let the children get the upper hand because this is the way my cooperating teacher runs her classroom ..... I would try to find out why the teacher thinks the children cannot be trusted and the reasons for this. Also I think it is important for me to get to know the children as individuals and establish some kind of basic trust with them. I think

that by trusting each other fewer discipline problems would evolve. (First IP #1)

There was no basic trust relationship between the teacher and her pupils. I would try to establish some sort of trust with the second graders and myself. I do not think that I would believe the teacher in that the second graders were trying to embarrass and destroy me. This attitude is very negative and definitely destroys the chances of having any good, sound relationships with the children. I think it would be good to get to know the children, the classroom situation, and the teacher to find out exactly why she felt this way. (Second IP #1)

b. Incomplete Paragraph #3. — This paragraph, which also elicited interesting differences between the experimental and control groups, begins as follows:

Some years ago, I visited a well-known demonstration school. Each classroom had a carefully picked teacher. Visiting the rooms in this school with the principal one day, I was much impressed with the beautiful work that many of the students had produced. Classroom after classroom was charmingly and artistically decorated with the children's productions: art work, science demonstrations, biological specimens, collections of all sorts and descriptions. After five or six such rooms we walked into another so different from the others as to be almost a shock. This room was nearly bare of the materials we had seen in the others. Instead, in this class the teacher sat in the middle of a group of children holding a quiet discussion. Leaving the room with the principal, I remarked on this fact, .....

Scoring of the responses is along a single dimension: attitude towards discussion — the value attributed to children's discussions in a lower elementary school curriculum. The range of the ratings is from rejection of discussions and a strong preference for activities (1) through feeling discussions might be good (3) to a strong conviction that they should be included, though not at the expense of other activities (5).

Table 9 shows that five of the eight students in the experimental groups who could increase their valuation of discussion did so and none gave it less importance at the end of the term. The students in the control groups present a very different picture: three positive shifts, three negative shifts, and four no change at all.

TABLE 9. — Final Ratings and Differences in Responses to Incomplete Paragraph #3 — Scored for Attitude Towards Discussion*

| Experimental group | | | Control group | | |
|---|---|---|---|---|---|
| Student | Rating | Difference | Student | Rating | Difference |
| Group I (juniors) | | | | | |
| #1..... | 4 | +2 | #11..... | 5 | +1 |
| 2..... | 5 | +2 | 12..... | 2 | 0 |
| 3..... | 5 | +1 | 13..... | 1 | -1 |
| 4..... | 4 | +3 | 14..... | 4 | +4 |
| 5..... | 5 | +2 | 15..... | 4 | 0 |
| Average final rating | 4.6 | | | 3.2 | |
| Average difference | | +2.0 | | | +0.8 |
| Group II (seniors) | | | | | |
| #6..... | 5 | 0 | #16..... | 3 | -2 |
| 7..... | 1 | 0 | 17..... | 1 | 0 |
| 8.... | 5 | 0 | 18.... | 3 | -2 |
| 9..... | 2 | 0 | 19..... | 4 | 0 |
| 10..... | 5 | 0 | 20..... | 5 | +1 |
| Average final rating | 3.6 | | | 3.2 | |
| Average difference | | 0 | | | -0.6 |

*Difference is positive if second rating was higher.

In the experimental group one student whose opinion about the value of discussions increased first writes:

Student #4: Either this room is not experiencing the realms of all sorts of creative activity, or the children have brought all their work home to their families. This was my "light" remark; but I really wondered why this classroom was practically bare of the lively material that meant so much to me as a child. As we walked in, I thought about how the children in the quiet discussion group were feeling — they must have been so eager to just express themselves with vital activity, motion, and just doing something. There's a time and place for gentle discussions with children, but it just seemed to me that they were being restricted and held down. Children want to be busy and involved with action. This situation seemed actionless to me.

I realized that my short visit was really not enough to form an opinion in, so I scheduled a conference with the teacher of this classroom to talk to her about it and find out her beliefs and goals as a teacher. (First IP #3)

After Grouptalk training, her opinion changes:

Either the children have taken all their art work and material home or this classroom is more engrossed in different aspects of learning.

Knowing that this was a well-known demonstration school, I kind of felt positively about it. If these children were honestly involved in this discussion and seemed to be gaining a lot from it, then this experience must be of great value. And yet, I feel that there should be "creative life" around them. It's beautiful, broadening and stimulating. Life is more than a small, quiet circle. Having some science demonstration and biological specimen in the room gives them tangible evidence of the outside world – more than just themselves. There should be a mixture of everything. (Second IP #3)

Two other students express views at the end of the term on the importance of including peer-centered discussions in the curriculum with even greater conviction:

Student #3: Wow! They seem to be having a Grouptalk or a Classtalk! I was pleased to see that the education of the child at this school included informal conversations. Through this process you get a much more complete picture of a child's personality. This indicated to me that the children were experiencing a very complete process of learning involving all parts of their personality. (Second IP #3)

Student #5: .....the important thing is that all of it come from the children. I also think it is exceedingly important to give the children frequent opportunity to verbalize themselves. (Second IP #3)

Two others retain their previously high opinion of discussions:

Student #6: I feel informal discussions would benefit the child much more – drawing the reserved child out and letting the children help each other instead of heaving a teacher-oriented talk. (First IP #3)

.....discussion is very important in a child's social and mental development ..... It is necessary to incorporate a time for group discussion in that schedule. (Second IP #3)

Student #10: This group of children were becoming an active part in their education ..... they were communicating not through

such media as paint and rocks, but through speech. They were learning one of their most important lessons, how to communicate with others in a very intellectual way. (First IP #3)

.....this teacher is more reliant than the others on group communication. This is a great way to teach them both academics and social learning, how to live and talk with people. (Second IP #3)

Only two students in the experimental groups respond to incomplete paragraph #3 either with skeptical or negative comments about discussion at the end of the term.

Student #9: This room is so different from all the others! What goes on in there? (Second IP #3)

Student #7: .....I am interested in understanding what as a teacher her goals are and how she is trying to accomplish them. I would be curious to know how she has set up her particular room and why. I would express my opinions that children do not learn in a quiet sterile classroom. Hopefully, we would have an honest enough discussion to draw some conclusions. (Second IP #3)

In sharp contrast to the numerous changes of opinion among the majority of the students in the experimental groups, there are almost no shifts whatsoever in the control groups. Five student teachers think highly of discussion at the beginning and do at the end, too. This pair of responses is typical:

Student #11: Perhaps this teacher can reach his class by talking. He may have such a rapport with his children that they find it easy to express themselves in words more than in art work. His sitting in the middle of the group and talking quietly may be of more value to the children than having him stand up in front of the room and give some sort of an assignment which the students would then produce. (First IP #3)

I think that discussion is a very important part of any classroom, as children must feel free to express their ideas and must have the skills to do this. (Second IP #3)

Another student maintains an open mind to both types of teaching techniques:

Student #19: I should think the discussion classroom requires a lot more from the teacher – she relies on herself as a means to educate – other classrooms rely on the materials to educate. Which is more effective? (First, IP #3)

Two students begin the term with a more positive attitude towards the discussion taking place in the experimental school than they have at the end:

Student #16: This teacher was holding a very important activity — that of talking, discussing, and listening. The room they used was of little importance unless they were discussing some aspect of their classroom experience ..... Otherwise things on the walls might have hampered a free discussion in which everything came from the children's mouths and minds alone. (First IP #3)

There is always merit in a quiet discussion between children and teacher when the topic is interesting enough to hold their attention and have everyone contribute. Usually, however, an experience in science or art is much more meaningful and lasting to children. They are geared to play, action, and getting into things; and especially for a less verbal child, the experience learned through doing something is closer to their realm of activity. (Second IP #3)

Student #13: I, too, would be curious why when all the other classes were designed or set up in one way, another room was entirely different. Perhaps the teacher found it more effective to conduct her class in a quiet discussion. Maybe the students in this classroom have the same advantages the other children do during part of the day, and then the teacher likes to take them aside in an informal manner. Perhaps the students are more relaxed in an atmosphere like this. The teacher could also have been trying to test or analyze a group of children by allowing them to talk with her and their fellow students. (First IP #3)

The teacher in this class apparently felt that this type of a classroom was more conducive to working than one with a lot of things going on at one time. I would certainly have wondered, however, if this was the way the class was always conducted and arranged. The appearance of a room often shows the type of personality a teacher possesses. Perhaps this teacher felt that it was more beneficial to the children's learning processes to verbalize rather than to have the children examine things and learn on their own. It sounds as though the teacher was not allowing the children to think enough on their own by not allowing them to create art work or work with learning materials. She sounds as if she would rather have a quiet classroom than one which is maybe noisier but the children are working or playing constructively. (Second IP #3)

Finally, two other students in the control groups start off with a negative evaluation of discussion and do not change:

Student #12: But I wonder if the children in this last room don't feel a little cheated when they see the other rooms ..... I don't think that every teacher can have the same amount of art work or science, etc., in his room just for the

sake of having it, but I wonder if his children feel free to express themselves in this way. (First IP #3)

The teacher must be a very independent person. I would like to speak to her sometime about her methods and the things she emphasizes. (Second IP #3)

Student #17: A room completely bare is very depressing and gives a rather cold feeling. (First IP #3)

It would seem that in a room that was bare, and where the discussion would seem to be teacher-oriented, that a real stifle of the imagination was taking place, and that children were not being allowed to exploit their creative powers. Also, I don't think that they would have the confidence and security in relation to their own work as the other children would have. (Second IP #3)

c. Incomplete Paragraph, #5. — The third paragraph that differentiated between the experimental and control groups begins as follows:

The twenty children in the unstructured second grade classroom were fairly quiet until one boy snatched some blocks away from another child. Three or four others became involved in the loud dispute. One came to tell the teacher what had happened. The teacher .....

The scoring of responses is on two dimensions: (1) amount of responsibility delegated to the children for resolving disputes, and (2) ability to set limits for the classroom with flexibility and without punitive control or moral lectures.

The contrast between the responses of the experimental and control groups, as Table 10 indicates, is considerable. Not only are the average scores higher at the end of the term for both experimental groups on both variables than they are for the control groups, but all the changes that do take place are positive, whereas some of the changes in the control groups are negative.

Excerpts from typical protocols illustrate the positive and negative changes that took place. This pair of responses from a student in the experimental group shows a slight positive increase in delegation of responsibility and effectiveness in setting limits:

Student #4: She walked calmly over to the disturbed area and asked the child who had snatched the blocks away, "Why?" He didn't pay any attention to her until she had repeated his name several times and the other children had noticed the teacher's presence. He really didn't admit why, but just threw the blocks down and stomped off to another section of the classroom and picked up another activity as if nothing had happened. The teacher responded as if nothing had happened too and knew that he knew what he had done. (First, IP #5)

.....must have been engrossed in something deeply if she didn't notice this and had to be told by another child. She went over and asked them to explain what happened. They didn't hear her or pay any attention to her, so she asked them if they could be calm enough and control themselves enough to explain to her what had happened. She asked them if they felt they had used "good judgment" in their decision for the loud dispute. They explained to her what happened and she said that they could continue the block playing if they did so in a sensible way, and if they felt they couldn't do this they could sit in their seats and work quietly at their desks. (Second, IP #5)

TABLE 10. — Final Ratings and Differences after Ten Weeks in Responses to Incomplete Paragraph #5 — Scored for Delegation of Authority and Manner of Setting Limits*

| Student | Experimental group | | | | Student | Control group | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Delegation | | Manner | | | Delegation | | Manner | |
| | Rating | Diff. | Rating | Diff. | | Rating | Diff. | Rating | Diff. |
| Group I (juniors) | | | | | | | | | |
| #1 ..... | 5 | 0 | 5 | +1 | #11 ..... | 3 | 0 | 4 | 0 |
| 2 ..... | 4 | +2 | 5 | +3 | 12 ..... | 1 | 0 | 4 | 0 |
| 3 ..... | 5 | 0 | 5 | +2 | 13 ..... | 1 | 0 | 1 | 0 |
| 4 ..... | 2 | +1 | 2 | +1 | 14 ..... | 1 | 0 | 1 | 0 |
| 5 ..... | 5 | +3 | 5 | +2 | 15 ..... | 1 | 0 | 2 | 0 |
| Average final rating | 4.0 | | 4.2 | | | 1.4 | | 2.2 | |
| Average difference | | +1.2 | | +1.8 | | | 0 | | 0 |
| Group II (seniors) | | | | | | | | | |
| #6 ..... | 5 | 0 | 5 | 0 | #16 ..... | 1 | 0 | 1 | 0 |
| 7 ..... | 4 | +3 | 4 | 0 | 17 ..... | 1 | -4 | 4 | 0 |
| 8 ..... | 5 | 0 | 4 | 0 | 18 ..... | 5 | +4 | 3 | +2 |
| 9 ..... | 2 | +1 | 5 | +1 | 19 ..... | 1 | -3 | 3 | -2 |
| 10 ..... | 5 | +3 | 5 | +2 | 20 ..... | 4 | 0 | 4 | -1 |
| Average final rating | 4.2 | | 4.6 | | 2.2 | 2.2 | | 3.0 | |
| Average difference | | +1.4 | | +0.6 | | | -0.6 | | -0.2 |

*Difference is positive if second rating was higher.

Another student changes her answers considerably more. At first the teacher makes the decision and may have to punish a child:

Student #5: The action of the teacher would of course depend on her experience and knowledge of the children in the situation in the past. She should listen to the explanation of not only one child — but all the children involved and try to arrive at a decision that not only will allow the children (sic) but one that will bring the children who are fighting against one another to better terms.

One child might have to be reprimanded. It depends on the situation. The important thing is that the child knows he is being treated fairly. (First, IP #5)

In the second response, authority is delegated to the children, and the teacher is flexible and non-punitive in guiding the children to a solution of the problem:

Student #5: I believe strongly that children of this age must begin to work things out for themselves — but they are NO longer babies and the teacher must not make decisions but rather act as a guide to help the children work these things out. As a guide there are several factors that would have to come into consideration — first her understanding of the children involved — does the boy who started this do this sort of thing frequently — was there any motivation for the boy snatching away the block. These things and many more would have to be taken into account before the teacher could guide the children so that they could make a decision about what was to be done. If the children are unjust and the teacher is aware of this, then I think she would intervene to talk with the children to point it out to them. (Second, IP #5)

In the responses of the control groups the predominant picture is: no change at all. The following pair of protocols is typical in this respect:

Student #16: The teacher asked both sides of the dispute to tell what they thought happened. She listened to each side openly and was willing to let every child describe his story completely. When she had heard both sides she was still unable to settle the dispute. But she explained what had been wrong about every action and why. In this way each child was able to understand his actions and the teacher's justice. (First, IP #5)

The teacher asked each child involved to give her his version of what had happened. When she had heard everyone she was able to see what had happened. Someone had clearly been in the wrong. She took this opportunity to talk to all the children about the responsibilities of being a member of a group. She wanted them to understand that others' feelings must be respected and that when one is part of a group one cannot forget that people will have different ideas and feelings which must be remembered if everyone is to function in the group. (Second, IP #5)

Three students have lower scores at the end than at the beginning. The shift in their answers is toward greater teacher participation in the decision process and inflexibility in setting limits:

Student #17: .....at first just glanced over to the area where the commotion was taking place. She made sure that bodily harm was not taking place, and then she waited a couple of minutes to see if the argument resolved itself. If not, she quietly walked over and asked the boy why he had taken the blocks. Noticing the other children standing around, she asked them if they could think of a solution to the problem. She tried to act merely as a guide in letting the children solve the problem, and understand what their own feelings were. I do not care for unstructured classrooms, but I think I would have acted very similarly in this situation because I think that children should reason for themselves, and offer their solutions because they usually have the simplest and easiest solution to a problem when given the opportunity to think about it rather than being told just what to do. (First, IP #5)

The teacher walked over to where the dispute was taking place and asked who had been playing with the blocks first. Then she explained to the children that there were not enough blocks for everyone to use, and that if you wanted more that you had to ask for them. If X was still using them, then you would have to wait until he was finished. Then I would try and suggest some other activity that the child could engage in or suggest ways that he might use the few blocks that he had. (Second, IP #5)

Only one student in the control groups has a higher score on both variables at the end of the term:

Student #18: The teacher brought all the children involved in the dispute together to find out what happened. Although the emotional reaction would be to put the blame on the boy who is reported to have taken the blocks, I feel it is important to hear from him also. When a child is involved in the decision as to right and wrong and punishment, he is much more likely to abide by the ruling and feel the teacher is just and fair. (First, IP #5)

The teacher went quietly over to the group and asked them to relate the story. After hearing both sides they discussed as a group why this activity was not beneficial and what should be done. The teacher then left and let the second graders settle it. (Second IP #5)

d. Summary of Findings. — Important differences between the experimental and control groups emerge from this quantitative analysis. The findings indicate: (1) increased sensitivity to group dynamics, (2) a higher evaluation of children's discussions, and (3) a shift in their thinking about classroom management — with the shift characteristic of the experimental groups only.

2. Individual Patterns of Response Another way of analyzing the Student Teacher Paragraph Completion Test involves comparing the pattern of responses to each story before and after the student teaching experience, then looking for congruence of a student's answers from one paragraph completion to another — a complex and lengthy clinical procedure that yields a maturity score. In reading each story in the second set of responses, attention is focussed on evidence of change and growth in the following areas: (1) basis of commitment to teaching, (2) objectives of good teaching, (3) techniques for achieving teaching objectives, (4) sensitivity to others — adults, individual children, groups. Looking at the protocols in this fashion sometimes leads to a different picture than is obtained by scoring variables. For example, in the context of her answer to IP #1 a student may comment on the importance of the teacher's structuring situations to build up trusting relationship, but not make this explicit in answers to IP #3 or IP #5, which consequently are scored lower. This method of analyzing the test data leads to much more meaningful information about a student teacher's growth during her apprenticeship than the dimensional analysis, but it is extremely difficult to quantify.

An important and not unexpected finding emerges from the pattern analysis: differences in pattern between individuals are much greater than are changes in student teachers before and after apprenticeship. Highly individual patterns of opinion are revealed which have a remarkable degree of stability over the short period of time involved here. Even the language used to express ideas is strikingly constant, as the reader may have noted in some of the excerpts from paired protocols. Yet many students, in taking the test for the second time, spontaneously commented on having forgotten completely what they had written earlier, and genuinely wondered what they had said.

The contrast between two sets of responses to IP #1 — Student #3 being less mature than Student #15 — is an excellent illustration of the individuality and the stability in outlook characteristic of responses. The manner in which these two student teachers complete the other four paragraphs conveys equally impressive and stable evidence of their difference in maturity:

Student #3: Her initial reaction was one of shock. A teacher with many years experience must be very narrow minded to take such a view of young children. In fact the teacher must not trust anybody very much. She must not be very responsive to the needs of her children either. The student teacher felt that not to trust the children would show a lack of self-respect and respect for other individual's needs and characters. A basically insecure and paranoid person would feel the students were trying to embarrass or destroy her.

As a student teacher she tried to convey the feeling of trust and respect for the children through individual contact at first. She discussed her feelings about the classroom with the teacher. The student teacher felt the classroom structured to the point of rigidity where individuality and creativity were stifled. She asked to try teaching a lesson

allowing for more individual choice and freedom, showing her trust in the children. (First IP #1)

She immediately felt that the teacher had very little trust for people and specifically for the children. The teacher seems to have a persecution complex and appears to be very paranoid. The teacher seems to have very shallow understanding of education and learning. "I wouldn't be surprised if her class were highly structured to keep the children in line," said the student teacher!! The teacher must not be very sensitive to her children or understand them very well if she is so obsessed with discipline. The teacher's own ego demands have become so completely important that the teacher is unable to give anything to her children and therefore is a terrible teacher. (Second IP #1)

While Student #3 may have an excellent understanding of the cooperating teacher's personality and of the children's needs, she disregards and appears to be insensitive to the effect of her own actions on the teacher and the functioning of the class. The other student teacher is cognizant of this complexity:

Student #1.5: A student teacher in this case may use this piece of advice to draw some conclusions about her teacher. It is reasonable that the teacher does not want a chaotic classroom as they would be unable to accomplish many things. However, the teacher's use of the phrases "upper hand", "enjoy scheming to embarrass and destroy...", may indicate the teacher's general inability to handle her class. Therefore, she feels she must protect herself from the children. The student teacher should doubt such intentions on the part of the children. She feels the necessity for the authority role of the teacher — but also, the necessity for teachers and students working together to learn and enjoy activities of the classroom. It is possible that by the time the student teacher enters the classroom a barrier had been formed between the children and the teacher. She must keep in mind the teacher's feelings on the matter — and perhaps work to ease the tension that exists. (First IP #1)

Because a student teacher is inexperienced in dealing with a class of children, it is very possible for her to join in with her cooperating teacher in adopting the same attitudes and techniques. Without realizing it, a student teacher can make the mistake of not trying to form her own opinions and ideas. This alertness is very important for any student teacher.

In reference to the above situation, the student teacher must consider this advice analytically. The cooperating teacher cited two faults of the children: (1) they're not to be trusted, and (2) they constantly try to destroy the teacher. Without much investigation, it may be assumed

that this teacher is actually afraid of the children in her class. Consequently, she feels she must maintain "the upper hand", or a dictatorial control.

It is difficult because a student teacher cannot walk into a classroom and change it entirely. She must work herself into the already existing system. Her dealings with the children, as a whole, must somewhat coincide with that of her cooperating teacher — or else, she may develop an unbalance that may be hazardous to the functioning of the class into which she steps for only a short period of time. However, the student teacher in this situation must take it upon herself to be very observant: to speak with individual and small groups of children as much as possible. When she begins to take over lessons, etc., she can give the children a chance to take a more direct role. She must engender situations in which she and the children are working together. These kinds of things will foster trust and a more comfortable learning situation.

From time to time, she should inform her teacher of her progress and activities in this area. These discussions may have an effect on the cooperating teacher. (Second IP #1)

Pattern analysis, because its focus is on change in an individual, is a sensitive tool for detecting reliable evidence of growth. For example, the growth shown by the difference in Student #11's responses to IP #4 is also present in her paired completions of the three other paragraphs:

Student #11: Being a teacher means being in constant contact with young and active minds, most of which, I hope, will be eager to learn as they will be just starting school. Teaching should prove to be a constant challenge as the children will change from year to year and the world around us which needs explaining is ever-changing also. I have always liked young children very much and have found it stimulating to be around them. I like their frankness and their enthusiasm. Education is a field which I want to be a part of because the process of learning is quite exciting to me. I suppose that teaching young children could also be considered a kind of an escape for me because of my uneasiness when I am around adults as compared with children. I could not think of any other profession which I would enjoy as most of them include constant contact and working with other adults. I feel that in teaching I can really do something for somebody and make some sort of a contribution to our society, and thus I do want to become a teacher. (First IP #4)

Being a teacher is a challenging but exciting experience. Watching children learn is very exciting, but creating the atmosphere in which they may and will learn is a hard

job. I enjoy children and am interested in their growth. One can be very honest with children, and they will respond with honesty, and the role of the teacher is to guide them toward learning rather than to spout information for them to absorb. This idea of the really honest interaction that can take place between a teacher and children is very appealing to me. I originally chose teaching as a profession as the only thing which I could possibly do. Since then I have realized that teaching is not quite as easy as that; however, I have also found it to be much more appealing. There is a great deal involved in being a teacher but a good part of it is just helping children to learn about living with other people.

I had felt that going into teaching was a type of escape from dealing with adults; however, I have found that it is no escape from confronting this problem of mine. It is very important to deal with parents and administrators. My main reason for wanting to each is my interest in children. I feel that it also offers the change for me to be myself, and if that is not good enough, to then perhaps change accordingly. I am sure about my interest though I am not sure about my capability. (Second IP #4)

Here perceptions of the teaching situation and of herself have changed a great deal during her apprenticeship. Further gains in maturity with experience can be predicted confidently in her case.

These highly consistent patterns of opinion are impressive, especially since Dr. Bent and I found them to be strongly correlated with differences in the student teachers' self-confidence in assuming the teaching role and in their approach to such matters as directiveness, classroom management, and interest in and respect for individual differences. The pattern analysis, however, is not useful in this exploratory study because the results it yields are too individualized to report and too difficult to quantify meaningfully.

3. Summary of Findings The Student Teacher Paragraph Completion Test data show that the major quantitative difference between the experimental and control groups lies in their evaluation of peer-oriented small group discussions at the primary grade level. Some other important group differences in the direction anticipated emerged in response to IP #1 and IP #5: only the experimental group increased in sensitivity to group dynamics, including those of classroom management. Two incomplete paragraphs were non-discriminating: IP #2 and IP #4.

Analysis of the protocols was also made in terms of patterns of opinion, which call attention to an individual student's growth, not group differences. This method of examining the data helped in the intuitive assessment of what each student teacher in the experimental group had gained from Grouptalk training. It also led to some educated guesses about how the training might have affected students in the control groups — but to report the results of this line of reasoning would be reading tea leaves and an unwarranted invasion of privacy.

The potential usefulness of standardized paragraph completion projective tests for assessing some aspects of student teacher growth is, in itself, a challenging finding and goes beyond the value of the test in the present experimental context.

## D. RATINGS OF GROUPTALK LEADERSHIP

How effective as Grouptalk leaders did the student teachers become? Did all of the students show increased skill? Which aspects of Grouptalk leadership were easy to learn, which hard?

1. Overall Results of Practice Table 11 gives, in terms of overall ratings, my judgment of the students' competence at the beginning and at the end of the practice-plus-feedback part of the Grouptalk training period. These scores represent the average of the ratings obtained on six variables, described in detail after the discussion of the student teachers' overall performance.

TABLE 11. — Overall Rating Scores on Grouptalk Leadership before and after Practice

| Student | Ratings on leadership | |
|---|---|---|
| | Before | After |
| Group I (juniors) | | |
| #1 ..... | 2.2 | 3.0 |
| 2 ..... | 3.6 | 4.7 |
| 3 ..... | 1.5 | 3.8 |
| 4 ..... | 2.3 | 4.2 |
| 5 ..... | 2.5 | 4.3 |
| Average rating | 2.4 | 4.0 |
| Group II (seniors) | | |
| #6 ..... | 2.3 | 2.6 |
| 7 ..... | 2.5 | 4.3 |
| 8 ..... | 2.8 | 4.6 |
| 9 ..... | 3.5 | 5.0 |
| 10 ..... | 2.5 | 2.5 |
| Average rating | 2.7 | 3.8 |
| Average rating (Groups I and II) | 2.6 | 3.9 |

In the first Grouptalk session, Table 11 indicates, the quality of the leadership was a little below average for both groups (2.6), but by the last sessions it was well above average (3.9). This difference in the group average before and after practice (+1.3) is impressive. The scores of most students show significant gains. Seven out of ten raised their score by more than one point, ending with a rating between 3.8 and 5.0. The largest individual gain was +2.3, i.e., Student #3 whose score jumped from 1.5 to 3.8. Some students did not improve spectacularly, ending the term as average or below in Grouptalk leadership.

The rating of Student #10 remained stable at 2.5 and two other students showed only small gains.

On the average the juniors and the seniors are quite similar in their initial capacity (2.4 and 2.7) and also in the level of competence achieved at the end (4.0 and 3.9). Although the initial range is greater in Group I (1.5 to 3.6) than in Group II (2.3 to 3.5), the situation is reversed at the end: Group I shows less variability and a smaller range (3.0 to 4.7) than Group II (2.5 to 5.0).

2. Six Variables of Grouptalk Leadership The foregoing scores on Grouptalk leadership are averages only. They are derived from ratings of performance on six variables. The first three variables relate to performance of the leadership role in accordance with the directives explained in the Manual for Grouptalk Leaders (Whipple, 1969), which the students had read before conducting their first sessions:

1. Ability to focus on group process only and avoid intervention in the content of the discussion
2. Ability to use a variety of techniques to keep the discussion both flowing and peer-oriented
3. Ability to help the group follow the rules of Grouptalk.

The next two variables concern the leader's responsiveness to the situation, the combination of intellectual and intuitive understanding that is required of good Grouptalk leadership:

4. Sensitivity to the needs, abilities and limitations of the individual children
5. Sensitivity to group dynamics and ability to promote cohesiveness.

The final variable concerns the quality of the interpersonal style:

6. Consistency in the maintenance of supportive, non-punitive authority

My ratings attempted to take into consideration the difficulty of leading the particular children in each of the groups, i.e., I gave higher ratings for average performance with difficult groups than with easy groups. This I felt competent to do, since I had watched the children in their classroom and had led their first Grouptalk session.* There are no measures of the degree of difficulty of leading the various children's groups, nor measures of leadership ability before training. The first rating was given after the student teachers had participated in several adult sessions and read the Grouptalk manual; therefore it represents ability before practice in leadership, not before training.

*Most groups included a "problem" child (i.e., one who was a source of disruption in the classroom, or had repeated a year, or was receiving special treatment, etc.). Nevertheless, some of these groups I found relatively easy to lead.

It is important to note that the second series of ratings refer to leadership of groups which were being asked to handle increasingly difficult tasks – such as deciding on their own Grouptalk question – hence the skill demanded of all the leaders became greater with time. In a very real sense, some learning and increase in skill had to take place for a student teacher to receive the same rating before and after practice, i.e., the final ratings systematically underestimate progress.

Selections from my comments about three student teachers after listening to their first and last Grouptalk sessions perhaps should make my ratings of their leadership performance more meaningful:

Student #2: .....Seems very much at ease (said her fears disappeared almost immediately). Relatively few content responses and evaluate reactions (said she heard herself saying "good idea" and knew she shouldn't, but taught to do that by classroom teacher). Asked children for response to what another one had said, with excellent results. Outgoing and sensitive. No problem children in the group. (First rating: 3.6)

.....With notably few exceptions, stays completely clear of content and promotes peer-directed discussion. Keeps her own interactions at a minimum, yet is directive when necessary. Group has achieved very high quality discussion, which they and leader obviously enjoy. Group has assumed most of leadership functions. (Second rating: 4.7)

Student #3: .....not very sensitive, response to children too rational .....interested primarily in brighter children and their ideas..... Gets discussion confused by her own strong interactions with the children and lack of ability to follow the multiplicity and fluidity of their contributions..... not supportive of group effort – ends session with negative comment: "Since you don't have anything more to say, we'll listen to the replay." (First rating: 1.5)

.....Leader seems more secure: happier tone to her voice.....children enjoy session.....group's excellent discussion proceeds without frequent interruptions, though still a few unnecessary ones.....helps discussion keep going with spot summaries.....achieves contributions from everyone in the group, including the shyest member. Still could be more supportive and less intellectual in her approach. (Second rating: 3.8)

Student #5: .....Even though she does a fairly good job of leading discussion, group gets completely out of hand because of short attention span of problem child. Leader tries to push for too long a discussion under the circumstances – lack of flexibility. Also needs greater facility in helping children to expand on their ideas. Calm, firm and warm at all times. (First rating: 2.5)

> ..... When group gets off subject, brings them back quickly and well. Makes good use of techniques that keep discussion directed to peer-group. Complimentary after effective exchange. Has managed to keep problem child from disrupting group, though child incapable of sustained participation. Excellent group cohesion, considering the circumstances. (Second rating: 4.3)

Most students, but not all, made gains on each of the leadership variables measured. Table 12 breaks the overall rating on leadership ability down into its component parts for the two experimental groups. The student teachers became particularly adept at confining their comments and expressions of enthusiasm or disapproval to the process of the discussion and not interacting in matters of content (2.8 to 4.1). They became more skillful in helping the children keep discussions going and in making them peer-oriented – not directed toward the leader (2.4 to 3.9). Their competence in guiding the children to observe the rules of Grouptalk increased (2.4 to 3.8). The student teachers became more aware of individual differences, quicker to understand the children's communications, both verbal and non-verbal (2.6 to 3.9). They also responded with much greater sensitivity to the group's interactions, the average gain in this category being the largest of all (from 2.1 to 3.8). Finally, there was some change, although a much smaller one, in interpersonal style (3.4 to 4.0). Some of the student teachers became more confident in the leadership role, more consistently non-punitive and supportive. In this one respect the Wheelock students had been above average as a group at the beginning, so there was less leeway for improvement.

These ratings, I should repeat, apply to leadership of children's groups which differed considerably in their initial cohesiveness. The quality of the student leadership, hence the ratings, might have been somewhat different had the groups been interchanged. Another point should be mentioned: my ratings do not always coincide with the student teacher's self-appraisal of competence. In two cases where I judged inadequate progress, the students thought they had made quite a bit. The eight other student teachers and I were in closer agreement.

3. Summary of Findings The data on changes in Grouptalk leadership skill with practice indicate large increases for seven of the ten student teachers. Towards the end they were much more adept in guiding complex small group interactions in accordance with the philosophy of Grouptalk technique than they had been with the initially simpler one. The other three students, although more competent than at the beginning, did not become highly accomplished Grouptalk leaders. The increase in skill for both juniors and seniors was most marked in learning to avoid content interactions. However, both groups showed some gains on all six leadership variables.

TABLE 12. – Average Group Ratings for Grouptalk Leadership on Six Variables before and after Practice

| Leadership variables | Ratings on leadership | | | | | |
|---|---|---|---|---|---|---|
| | Group I (juniors) | | Group II (seniors) | | Both groups | |
| | Before | After | Before | After | Before | After |
| Functions of leader - avoids content | 3.0 | 4.4 | 2.6 | 3.8 | 2.8 | 4.1 |
| Sustains peer-directed discussion | 2.4 | 4.2 | 2.4 | 3.6 | 2.4 | 3.9 |
| Guidance in Grouptalk rules | 2.2 | 4.0 | 2.6 | 3.6 | 2.4 | 3.8 |
| Sensitivity to individuals | 2.4 | 3.8 | 2.8 | 4.0 | 2.6 | 3.9 |
| Group process | 1.8 | 3.6 | 2.4 | 4.0 | 2.1 | 3.8 |
| Inter-personal style | 3.2 | 4.0 | 3.6 | 4.0 | 3.4 | 4.0 |
| OVERALL RATING | 2.5 | 4.0 | 2.7 | 3.8 | 2.6 | 3.9 |

## E. ADULT GROUPTALKS

The selection of the questions for discussion in the adult Grouptalk sessions (cf., Appendix II) provided opportunities for increased understanding of children and the teaching process. To what extent did they contribute to the students' growth?

1. Juniors The following excerpts from the first experimental group's adult Grouptalk sessions illustrate changes of opinion, insight and growth, brought about through these discussions.

In Grouptalk #2 the question was, "How are the rules of Grouptalk learned?" Student #1 suggests that the rules should be defined: "It's hard to follow rules that aren't defined." The others, thinking back to the previous week's discussion, realize they had been following rules without any formal presentation of definitions. Student #2: "You learn by doing, so to speak: you learn the rules by carrying them out in a group situation." Student #1 assumes that children, however, need to have rules presented to them: "What about with children? Would that work if you have to tell them the rules first?" By the end of the discussion, Student #1 realizes how she herself has learned the rules of Grouptalk. This leads to a much clearer understanding of how she,

as a teacher, might communicate them to a group of children without a long explanatory preamble.

The next Grouptalk session (#3) further solidifies her change in point of view. The question was, "What are the implications for classroom management of the method used to introduce you to Grouptalk?" The students, after reaching agreement on the meaning of the question, all help formulate how the method used to introduce them to Grouptalk applies to the classroom.

Student #1 summarizes their conclusion:

> The method is not telling on the part of the teacher, and having the child tell. And that could be for one child or 30 children. We were never told. We just did, and thought about it after. Applied to a classroom, I think that's the major implication.

Student #2 adds another point:

> Structure is placed there for the children to have to discover it. There's an opportunity, an environment, in which they can discover it instead of having it pointed out to them.

The fourth adult Grouptalk session took place after each of the student teachers had watched me introduce Grouptalk to the children in the second grade group she would lead. The question which I had selected called their attention to the way a teacher structures a specific learning situation differently in response to individual differences among the children and to differences in group cohesion. They compared their observations of my leadership technique in leading the different groups. This led to a better understanding of how flexibility in teaching takes both individual differences and group dynamics into account. Their summary brings out both points:

Student #1: We all had some similar and some.....quite a few different experiences with the kids in terms of how well they listened to each other, whether they were very verbal, whether there was one child who was particularly expressive, or everyone seemed to participate. Certain people had very quiet children. And all these qualities appeared in different Grouptalks.

Student #3: Also, we talked about the leader having to keep bringing up different points and trying to keep everything under control more in one Grouptalk than in another.

Student #4: And differences in how much the leader had to enter into the Grouptalk in order to keep it going.....

Student #1: And orient the children to what each individual child was saying to try and make the group more cohesive. Some groups seemed to be quite cohesive right from the beginning.

In summarizing the next Grouptalk session, concerned with Grouptalk leadership technique, Student #3 says:

> We've talked about discipline. We've talked about not expressing our own values on what they've said – like telling them, "That's a good idea," "That's a bad one," or like, "That idea is great." I think we've not only looked at the children. But we've also looked at ourselves .....how we can change to handle them better.

Grouptalk question #6, "What has Grouptalk taught you about children?" elicited an interesting interchange from which the following comments about second graders are drawn:

Student #1: It's taught me primarily that children are still self-centered to some degree at this age. They like to hear their own ideas, voices on the tape recorder. And I think that I haven't really zeroed in on how much they wanted to express themselves.....

Student #4: I found that they have the ability at this age to interact and that they can. And that there's a certain level on which they do. They're not only concerned with what the teacher thinks of what they're saying, but they are interested at this age with what one another is saying, and how their peers react.

Student #1: .....the other children can help build up their own self-image.

Student #2: .....there's also a need to still stick to fantasy and to still have fantasy a part of their everyday life, whereas the kinds in my third grade are a little more realistic and a little more social.....

Student #4: I learned a whole lot from the fact that they can honestly tell you how they would react in a situation, if they were called upon to react as an adult in a serious situation, what they would do. And they've got some very definite ideas about it.

Student #1: But in addition to that, they also rely an awful lot on releasing a lot of energy and a lot of tension through fantasy. Maybe for a lot of children in this age group it's an important part of their security.

Student #3: They're really capable of a lot more independence than I formerly thought they were. Because they don't need a step-by-step guidance. Just once they think they understand something, they just take it right over. And this really amazes me. They're capable of a lot.....they're so perceptive, too.....they remember sometimes better than I can. If you say something, you're going to have to remember. Like standards you set for discipline – you're

going to have to remember what you've said because, if you loosen up, they're going to remember and pick you up on it.

Student #1: They have a great sense of fairness and justice. They see that something isn't fair — everyone isn't given the opportunity to express themselves — and chances are they'll let you know about it.

Student #4: Their personalities are very defined and they're very different.....just small things that you pick up in Grouptalk that you might not be able to notice anywhere else: the repetition of certain ideas in different questions, the reactions to certain types of situations..... In just a matter of three half-hour sessions that we've had, I'm surprised at how many things you can pick up that might take you months in the classroom..... You might never get an opportunity in the classroom, no matter how good a teacher you were, no matter how much individual attention and how much interaction there was with them talking, because this is something that's completely irrelevant to the classroom. You don't discuss the way you do in class. So you're getting a different side of the child.

As they talked together and shared insights they had gained, new learning was taking place.

2. Seniors The older group of student teachers show the same type of growth stimulated by the adult Grouptalk discussions. Even though these girls had already had a period of school apprenticeship the previous spring, their first session shows that they are still trying to formulate aspects of their own philosophy of education, to decide how much freedom of choice should be given to the individual child, and how much order the teacher should impose. All of them strongly reject the rigidly structured classroom. But beyond that, how much structure should a good classroom have? They are confused, as Student #8 indicates:

> How about those classrooms where you walk in and kids can choose what they want to do when they want to do it? And, if they don't want to finish what they're doing right now, they can go on to something else — is that an ordered classroom? Or is that a chaotic situation where they need restrictions? This is a question that's been bothering me.

In their second adult session they attempt to understand how they learned the rules of Grouptalk. They talk about learning through participation, discovery, then go beyond that to recognize that the discussion about the rules which they are having is also an important part of the learning process; furthermore, that the situation had to be carefully set up for them by the leader to accelerate their learning.

The two sessions subsequently devoted to discussions of Grouptalk leadership technique were helpful in directing their attention to the

complexities of group dynamics. For the last session, the four student teachers present selected their own question, "What have we learned from Grouptalk?" The answers, they decided, would cover not only their own learning, but also what they thought the children in their groups had learned from being exposed to this new discussion technique. They listed a wide variety of things learned:

Student #9: .....your opinions don't come nearly as much into play as far as determining the success of the Grouptalk goals. It's more that you are following a prescribed method of dealing with children rather than supplying them with the richness of your own resources..... You're not fishing for ideas and trying to use yourself as a stimulator of ideas as much as you're just trying to get the children to realize a certain way of discussing, no matter what they're discussing.

Student #10: No matter how much knowledge the leader has about the topic being discussed, it really doesn't matter.....it's not relevant.

Student #7: You learn to let them have their own ideas. As a teacher, or as a leader, you learn to give up a lot of prescribed notions on what you think they should say and they should come out with. And you realize that they have their own ideas which are just as valid, if not more so, than yours.

There was general agreement that Grouptalk sessions help promote learning through discovery, that there are no right or wrong answers to the best questions chosen for discussion. But the argument became heated when they attempted to follow through the implications for classroom teaching. Should the teacher care whether the discovery process leads the child to the correct answer in such things as math and reading? One student teacher said she was not at all concerned about correct answers: "I believe that in teaching the process is more important than the content." (Student #6) Others were equally convinced that the goal of a math lesson also involves learning to get correct answers, that this is a fundamental part of teaching. Grouptalk in this sense also has an end product: to better equip the children to know how to carry on a discussion with each other. The children learned this:

Student #9: .....because of the way we guided them, you know: "Stay relevant," "Do this," "Do that," "Don't do that," "That was good," "That was very good." Encouraging them .....discouraging them from talking at the same time. So yeah, we teach them that.

All agreed that they had become more aware of the need for structuring situations in order to promote learning through discovery, that children's trial and error needs guidance:

Student #10: I think the children are learning also through their mistakes how to talk to other children, how to share their

time, how to listen to others.....especially by hearing their tape replayed.

There was greater awareness of the conceptual development of second graders and how this affects the sensitive teacher. The importance of double checking the adequacy of communication was stressed:

Student #7: I think we've learned about how children think about different things and how at a certain age level they have no concept of what something meant or how they could define words. They don't.....at this age they cannot do it. They don't see it at all. I found that mainly because of the definitions.....it isn't the same as how a child at a higher level, grade, understands things..... So when it's carried into the classroom, you realize when you say something, it may seem perfectly logical to you, but they don't understand it the same way. Then they really don't know ... like time concepts: it may seem logical to you that or example, they should know to come back in ten minutes. But they don't understand it and they'll come back in two minutes. I think there are things you should approach differently or should word differently. If you say certain things you are just not going to be understood. And you should understand why they're not being understood; not just because the children are stubborn or ignorant, it's just that at this stage.....they haven't got all the background for it.

Small group interaction was better understood:

Student #10: I've seen a lot in how a small group interacts, a small social unit will interact with one another, which is really important in the classroom, especially in a personal situation, where it is basically socially oriented, where their interaction is very important..... I'm learning when to cut off a conversation when the children start getting restless and their attention is gone. I'm learning how and when to cut them off.....

Everyone learned that choosing a good question for the Grouptalk is very difficult. A question that one group found exciting might lead to scapegoating in another:

Student #7: I think it's hard. It really takes sitting down and thinking about each one of those children individually and then thinking of each one of those children interacting with the group, to get a question that's going to interest all of them, that's going to try to avoid some of the problems that they run into with each other.

3. Summary of Findings The content of the adult sessions of both experimental groups suggests that the Grouptalk experience contributed in a number of important ways to the students' education as teachers, and that participation in the adult Grouptalks was an essential part of the learning process.

## F. FINAL PAPER

Most students took very seriously their individual studies assignment, even though performance in the student teaching course is not given an official grade, just pass-fail. They knew that their gains from the individual project would be a function of what they put into it and that it would help in their self-evaluation as well as supply data for this exploratory study. Here was an opportunity to relate educational theory to practice on the basis of their own experience. How did the experimental and control groups react to this opportunity to learn?

1. Control Groups The projects selected by the first group of control student teachers covered a variety of areas: creative writing, oral expression, creative dramatics and social studies. The seniors worked in the fields of individualized reading, science, creative speaking and art appreciation. There was pressure from Dr. Bent to teach a small group of children only, not the entire class. But, in view of the varying needs of the cooperating teachers, this request could not be made mandatory. Most of the studies but not all involved teaching the children something. Several created opportunities for self-expression and one was primarily observational.

With the exception of one very long paper of 4,000 words, the reports run about 3,000 words. In the introduction there is a statement of the project's relevance to the student teacher's interests and to the education of young children. Usually there are numerous references to what educators have written on the topics. The bulk of most papers consists of detailed descriptions of the project which tend to be chronological. There are many sensitive portraits of individual children and accounts of their activities. But, with two notable exceptions, answers are sparse to the four assigned questions: (1) What did the individual children learn? (2) What changes took place in the group? (3) What did you learn about children? and (4) How has your self-image been affected?

Was this failure to supply the data so essential to the experimental study perhaps because of the character of the projects undertaken? Only one of the student teachers in the first control group worked exclusively with a small group. The others taught a unit to the entire class and made special observations on four or five children who, for the most part, did not constitute an interacting group. It was difficult, if not impossible, under these circumstances to talk about group dynamics. However, three of the students could have focussed far more than they did on the other assigned questions. Perhaps our instructions for writing the final paper had been insufficiently stressed? All the students in the second control group worked part of the time with small groups, their plans were submitted before mid-term, and their attention was carefully drawn to the questions they were supposed to answer. Yet they too were erratic in commenting about what the children had learned, changes in the groups they worked with, what their individual study had taught them about children, and how it had affected their self-image as a teacher. Why? Was instruction in Grouptalk techniques needed in order to focus their attention on these areas?

In presenting my evaluation of the final papers, I decided to minimize interpretation by quoting extensively. In many cases I have included all of the relevant quotations from all of the papers. Where I have not done this, I have indicated either that the quotation is the student's typical response or that other students have included similar material. It should, therefore, be possible for the reader to draw his own conclusions from the data and independently to evaluate Grouptalk as a teacher training instrument.

a. Observations on What the Children Learned. — Six of the ten control students' answers to this question convey the impression of great sensitivity to individual differences. Two are moderately detailed. One student failed to say anything about the children in her group. Another describes them primarily as a unit:

Student #18: These were all children I had observed as alert, aware of many varied topics, and most verbal. I felt that for the benefit of the whole group, I should choose children who would be interested and would contribute to the discussion.

This student had no interest in differentiating among the children or in teaching them, so she sidestepped the question of what they may have learned. She wanted to learn more about second graders' abilities, using as source material the responses verbal children would make to a certain type of lesson.

Statements about what the children learned cover a variety of areas. They touch on greater social awareness, greater self-expression, gains in knowledge or skills related to the specific ongoing project. Some children learned to write better, some to read better. Some learned facts in a social studies project. Others learned about communication and had a chance to talk to each other and to the rest of the class. Some learned how to participate more creatively in informal dramatics. It is impossible, however, in reading half of these accounts, to follow the progress of an individual child, to see in what particular way the experience had been enriching for him:

Student #11: I was sorry that I could not examine these children's development more closely, but for the type of project I chose, I thought it more beneficial to work with the whole class at once.

Student #16: As I could only work with my group an average of 45 minutes per week for five weeks, it is impossible to measure any real overall gains. I can honestly say that James' attitude was one of sincere respect for me in the classroom — a direct result, I feel, from Creative Dramatic work. It is difficult to say that John's image changed — but I think if this program was carried out over a longer, more concentrated period of time, it definitely would help my Cherubs. Again, a marked change in Donna and Ellen could not possibly be noted. Robert's attitude on our last meeting was one of complete alienation from the

DOCUMENT RESUME

ED 045 592 24 SP 004 486

AUTHOR Whipple, Babette S.
TITLE Evaluation of a Small-Group Technique as a Teacher Training Instrument. Final Report.
INSTITUTION Wheelock Coll., Boston, Mass.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO BR-8-A-053
PUB DATE Apr 70
GRANT OEG-1-9-080053-0104 (010)
NOTE 116p.

EDRS PRICE EDRS Price MF-$0.50 HC-$5.90
DESCRIPTORS *Evaluation Techniques, *Group Instruction, *Small Group Instruction, Student Teachers, Teacher Attitudes, *Teacher Education, Teacher Improvement, *Teaching Techniques

ABSTRACT

An exploratory study was designed to determine whether the use of a new, small group technique adds significantly to the level of training in early childhood education. Two groups of five student teachers learned the technique and were then evaluated. The evaluation procedure was designed to measure changes in their educational objectives, their teaching techniques, and their teaching styles. Six types of data were collected for evaluation: 1) a final paper written by the students, 2) adult Grouptalk sessions, 3) ratings of Grouptalk leadership based on tape recordings, 4) student problems Q-sort, 5) teacher ratings, and 6) student teacher paragraph completion test. Two sources of quantitative data yielded inconclusive results, partly because the ratings of performance were obtained before the experimental training had been completed, and partly because of the questionable reliability of the measurements. The small size of the sample justified placing major emphasis on the analysis of the residual data, including the responses to a projective test, and the final papers. The analysis indicated that the experimental groups increased their self-understanding, gained a more mature perspective on their role, and became more sensitive observers of the children's thinking and needs. It is recommended that Grouptalk training be added to the curriculum of teacher training institutions. (MBM)

Final Report

Project No. 8-A-053
Grant No. OEG-1-9-080053-0104(010)

# Evaluation of a Small Group Technique as a Teacher Training Instrument



Babette S. Whipple, Ph. D.
Wheelock College

Boston, Massachusetts

April 1970

The research reported herein was performed pursuant to a grant with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

CONTENTS

Page

TABLES (Cont.)

# PREFACE

The numerous approaches followed today to improve teacher training are harbingers to the increased vitality of our educational system. This paper reports an exploratory study undertaken to determine whether a new small group technique, "Grouptalk," adds significantly to the already high level of student teacher training offered by a college which specializes in early education and has a strong liberal arts program. Wheelock College shares the goals of modern educators who hope to prepare today's children for the world of tomorrow, and has tailored its curriculum to prepare teachers with skills needed in addition to those of the "traditional" teacher. Emphasis is placed on training the teacher to understand how children think and to comprehend the complex relationships between personality and learning, and on helping individuals develop their unique potentialities in an informal group setting. The college recognizes the greater need for maturity in the beginning teacher in an unstructured teaching environment than was necessary for the new teacher in the more rigid, traditional classroom. The total program for preparing teachers at Wheelock College is oriented toward achieving these goals.

The willingness of Dr. Margaret H. Merry, President of Wheelock College, to sponsor my research project in harmony with this educational philosophy, is greatly appreciated.

It is a pleasure to acknowledge the contributions to the project made by a number of colleagues. I am most indebted to Henry H. Atkins, who was Principal of the Underwood Elementary School in Newton, Massachusetts, at the time plans were made with Wheelock College to undertake this cooperative study. He did much more than initiate the contact and help think through the detailed proposals for a grant. In the early days of my research on Grouptalk with children at the Underwood School he was intrigued with the potential value of having teachers learn the technique. He urged me to offer Grouptalk technique training to staff members and student teachers working at Underwood. Their cooperation then helped channel its further development. His enthusiasm for the results was contagious. Without it, this project would have never materialized.

I would also like to thank Mrs. Carmella D. Nadeau, Principal of the Underwood Elementary School at the time of the experimental study, and those members of the staff who gave so generously of their time: Miss Sally E. Clark, Mrs. Ruth K. Davies, Miss Kathryn A. DeSano, Mrs. Louise J. Hauser, Mrs. Bessie B. Lyman, Mrs. Kristin L. Oldenburgh, Miss Marilyn Flanagan, Miss Katharine Sawyer, Miss Agnes L. Scully and Mrs. Susan W. Tregay. I am also indebted to the Principals of the Davis, Cabot and Ward Elementary Schools in Newton, Miss Henrietta Brebia, Mrs. Mary B. Winslow and Miss Madeline E. Bartell, and the following teachers at these schools for their willingness to supervise the students in the control groups and participate in the evaluation procedure: Mrs. Laura G. Avery, Mrs. Bonnie Bivins,

Miss Marcia J. Baur, Mrs. Mabel D. Ellis, Miss Barbara Kagan, Miss Aileen A. Lynch, Miss Dorothy A. Mattson, Miss Rose V. Mroszczyk and Mrs. Sharyn L. Weiner.

I am deeply grateful to Dr. Alma Bent, Chairman of the Teacher Education Department of Wheelock College, for her administrative help in carrying out the teacher training project. She generously made room for the study in her own education course and took the major responsibility for all arrangements involving the participating Wheelock students and cooperating teachers in the Newton Public School system. Her evaluations of the student teachers contributed substantially to the project because of her background of many years' experience in the supervision of student teachers and her extensive contact with the girls in both the experimental and control groups. I also want to thank all the student teachers who participated in the project for their essential and individual contributions. Mrs. Betty Lou Marple, my husband, Dr. Fred L. Whipple, and Mrs. Janet Moat have each made valuable editorial suggestions.

# I. INTRODUCTION

## A. SUMMARY

An exploratory study in the field of teacher training was designed to determine whether the use of a new small group technique adds significantly to the already high level of training offered by a college which specializes in early childhood education. While they were apprentices in the Underwood Elementary School in Newton, Massachusetts, two groups of five Wheelock College student teachers each learned a new technique called "Grouptalk," a specific type of small group discussion which I had previously devised as a tool to help increase thinking, communication and social skills. They learned it by participating in seven adult Grouptalks, reading my instruction manual, observing me lead a discussion with a small group of second graders, leading the same group of children in six Grouptalk sessions, analyzing the taped sessions in conferences with me, and, finally, by writing a report. The contribution of this very brief training program to the students' preparation as teachers was evaluated in six ways, four of them with the help of matched control groups, classmates in the same educational curriculum class, apprenticed at other elementary schools in Newton.

Two sources of quantitative data yield inconclusive results, in part because the cooperating teachers' and supervisor's ratings on performance, actual and potential, were obtained before the experimental training had been completed, in part because of the questionable reliability of the measurements. The small size of the sample warrants placing major emphasis on the analysis of the residual data, which includes the students' responses to a projective test and their final papers.

Analysis of these data indicate gains from Grouptalk training in the directions anticipated. The experimental groups increased their self-understanding and gained a more mature perspective regarding their role as teachers by examining in depth the nature and limits of effective authority. They also became more sensitive observers of children's thinking and needs. In comparison with the control groups, their understanding of how second graders learn, especially from their peers, became more concrete and meaningful. Above all, Grouptalk increased their familiarity with the complexities and importance of group dynamics, the social factors that affect the structure of the learning situation, and gave them valuable practice in using teaching techniques that can help establish group control without inhibiting self-expression. With a few notable exceptions, the individual study projects of the control groups give little evidence of specifically contributing toward their development as teachers in the areas under consideration.

The basic recommendation emerging from the exploratory study — that Grouptalk training should be added to the curriculum of teachers training institutions — is supported by the student teachers' unanimous enthusiastic response to the experimental program.

Two additional conclusions are: (1) A projective test, such as the Student Teacher Incomplete Paragraph Test, is potentially useful in predicting some aspects of teaching effectiveness and (2) Previous estimates of the pedagogical value of Grouptalk for young children, thus of its value in the elementary grade curriculum, are supported. However, experience with the problems involved in introducing Grouptalk into the elementary grades during the period of a student teacher's apprenticeship suggests that alternative ways of achieving this goal would be preferable.

Further exploration is thus indicated for three separate problems: (1) What is the most effective way to introduce Grouptalk into the curriculum of a teacher training institution?, (2) What alternatives are better than using apprentice student teachers as leaders in order to make Grouptalk available for the lower elementary school grades? and (3) How can the Student Teacher Paragraph Completion Test be improved as a diagnostic instrument?

## B. PROBLEMS UNDER CONSIDERATION

This report describes an experimental addition to the teacher education curriculum at Wheelock College – the instruction of student teachers in the use of a new pedagogical small-group technique, Grouptalk, during their apprenticeship in the primary grades of an elementary school – and explores its effectiveness in terms of the teacher training objectives of the College.* The evaluation includes an assessment of the value of teaching student teachers Grouptalk technique, of the specific method used to teach it, and of giving this training during a student teacher's apprenticeship. The study is also designed to shed some incidental light on the contributions that Grouptalk makes to second graders. Finally, it introduces the possibility of developing a new story completion projective test into a tool for predicting aspects of teacher excellence.

1. Teacher Training Programs. The many contributions to the broad field of preparation for teaching may, for convenience, be categorized roughly as concerned with: (1) noninstructional skills, such as order and routine, (2) knowledge of the content of a specific discipline, American history or mathematics, for example, and (3) the more general instructional knowledge and skills associated with the role of teacher. It is with this last type as applied to the primary grades that this exploratory study deals.

Educators working in this almost limitless area of broad preparation for teaching young children have emphasized the value of a large number of different types of training. There is general agreement on the importance of increasing the prospective teacher's understanding of

*The terms 'Wheelock students', 'students' and 'student teachers' will be used interchangeably and be differentiated from the terms 'children' and 'pupils', which are equivalent. 'Cooperating teachers' and 'teachers' have the same meaning.

child development, of the range of individual differences, and of the ways in which an individual can be helped to learn. More recent and controversial developments include the belief that the beginning teacher should also know something about group process and emotional education (Rogers, 1966). A few teacher training institutions include T-Group training in their curriculum with the aim of increasing the student teacher's familiarity with group behavior, his sensitivity to others, and his self-insight and maturity. For example, the Institute for Advanced Study in Rational Psychotherapy now runs a laboratory school where its students can learn to apply the principles of rational-emotive therapy to themselves and their young charges (IASRP Newsletter, 1970). Equally new but more widely accepted than this emphasis on leadership skills is the use of discussion groups as a method of instruction in teacher preparation programs. Arthur W. Combs (1965) advocates including "learning group" discussions, as opposed to "decision groups" and devotes several pages in his book, The Professional Education of Teachers, to discussion techniques.

Student teaching experience combined with academic courses is standard procedure in teacher education. Purpel (1967) lists four general functions of the student teaching: (1) orientation, or socialization, to the world of the school, (2) providing an opportunity to begin to develop an autonomous teaching style, (3) giving the trainee an insight into the professional requirements of a teacher, and (4) operating as a laboratory where the student confronts the theoretical aspects of teaching learned in courses with data accumulated through personal experience. These functions often are not fulfilled in current training programs. Sorenson (1967) expresses the most crucial defect as a failure:

> to provide the prospective teacher with a theoretical framework for use in planning and evaluating his own instructional activities. The entire emphasis seems to be on the learning of routines for getting through the day rather than on the analysis of the reasons for or the effectiveness of these routines. (p. 177)

He suggests the need for radical change:

> Much more attention needs to be given to the teaching of a theoretical framework and to showing how that framework can be useful in guiding the day-to-day activities of the teacher. (p. 177)

A means of correcting the theory must also be taught. Sorenson hopes that the steps taken to achieve this goal will:

> reduce the anxiety and even hostility which the data suggest many student teachers experience in practice teaching, and so increase the effectiveness of teacher-training programs. (p. 177)

Training in Grouptalk technique bears upon all of these aspects of a broad preparation for teaching. After a brief description of Grouptalk,

the rationale will be given for adding it experimentally to the student teaching program of a small number of Wheelock College students.

2. Grouptalk Technique Grouptalk is a specific type of small group discussion which I devised in 1965 and described in The Grouptalk (1967), a publication now out of print, and updated in unpublished mimeographed form (Whipple, 1969). The general definition is as follows:

> Grouptalk is a taped conversation in which a leader helps a small group of people follow rules in talking together to try to answer a discussion question. (1969, p. 2)

This general definition delineates the function of the small group (the members talk together to try to answer a discussion question), the function of the leader who is not a group member (he helps them talk together), and the conditions under which the group operates (they follow rules). Instruction in Grouptalk participation and leadership makes explicit with practice the techniques the leader uses to help the group talk together and the nature of the rules it must follow. There are three categories of rules: starting, discussion, and ending rules. The starting rules emphasize the importance of clarifying the meaning of the discussion question. Discussion rules seek to elicit active and relevant participation from all members. The ending rules pertain to summarizing the discussion and evaluating its quality while listening to a taped recording of it. Both the formulation of the rules and the manner of presenting them vary according to the age level of the participants. Grouptalk is appropriate for all ages beginning at the second grade level.

Regardless of the age of the participants, the leader's function remains the same. He facilitates the group discussion, while carefully refraining from giving his own answers to the discussion question. The leader concentrates his remarks on the process rather than on the content of the discussion. Grouptalk is not a vehicle for communicating information from leader to participants. Thus, when used in a school setting, it prevents the teacher from assuming the role of information expert. The Grouptalk session teaches children how to think, not what to think. It helps them to become more effective participants in a small group discussion. It increases their self-confidence and the quality of their verbal self-expression.

How is the use of Grouptalk as a teacher training instrument related to current activities elsewhere that stress small group discussions? There is considerable overlap with T-Group training in philosophy and goal orientation — Grouptalk also increases sensitivity — but major differences are basic. Grouptalk leaders structure the group's interactions, help the participants follow rules, whereas T-Group leaders do not. This makes for important differences in the kind of learning that takes place in the two types of small groups.

Grouptalk sessions also bear some resemblance to highly structured small group discussions, developed in California for primary school children. This program calls for structured group discussions for moral ideas starting with kindergarteners. In many ways the goals

are similar to those of Grouptalk. In addition to the sensitivization and awareness of group dynamics, the student teacher learns about children's moral growth and how to influence it. But both the goal and technique of guiding moral development are quite different from Grouptalk. Furthermore, it lacks Grouptalk's emphasis on cognitive processes: specifically, learning how to define terms, to maintain relevance, and to summarize.

3. Rationale for teaching Grouptalk What would student teachers gain from learning this new technique? Instruction in Grouptalk technique, we anticipated, might make a significant contribution to the training of Wheelock College student teachers during their apprenticeship in the second and fourth areas listed by Purpel (1967) referred to above. First, it might help the students begin to develop an autonomous teaching style in a situation where 'good teaching' usually means 'teaching the way the cooperating teacher wants you to teach'. Being able to progress towards establishing their own style would add to their maturity and self-confidence in their role as teachers. Secondly, it might also help focus attention on the way in which educational theory is related to the day-to-day activities of the teacher. By increasing their understanding of how children feel, think, interact in small groups, of how these interactions affect learning, and of how they as leaders are involved in the group dynamics, Grouptalk would solidify the students' educational philosophy and make the application of theory more meaningful in the classroom.

Expectations that these results would come about were based partly on the nature of Grouptalk itself, partly on the method that would be used to train the students in the technique, but also on my previous experience in teaching students Grouptalk technique.

a. Expectations Based on Nature of Grouptalk. — The wide range of questions from which a particular one is selected for a Grouptalk discussion is an important factor in accounting for the flexibility of the technique as a pedagogical tool, for its appropriateness over an enormous age range, and also for the variety of types of gains to be made from a given session. Questions can be simple or complex, realistic or fanciful: "What kind of flower would you like to be?" (second grade), "What if there were no communication between Southeast Asis and the United States?" (fourth grade), "What contributes to a favorable student teaching experience?" (student teachers), "Has the United States reached the limit of its ability to educate its children without population control?" (staff). The Grouptalk session is particularly well suited to convey to an observant leader how children of a given age learn, think, and interact in small groups because the basic structure of Grouptalk restrains the leader from entering into the discussion of content. The teacher is constrained to listen to children's uncensored communications. He is not supposed to interrupt or direct the flow of ideas. As a consequence of being in this position, the leader has an unusual opportunity to increase, through concrete experience, his understanding of children and test the appropriateness of his philosophy of education. Grouptalk encourages children to be creative and to take responsibility for the direction of their discussions. For this reason, observation of changes in their behavior over a series of

sessions should support the view that children's learning is most effective when self-directed. At the same time, the requirement that the leader help the group maintain the discussion according to the rules of Grouptalk teaches the leader a great deal about group dynamics and techniques of group leadership. It also highlights the relationship between his actions as leader and the children's learning.

b. Expectations Based on Training Technique. – The student teachers would learn Grouptalk technique by following a procedure which we hoped would also contribute to their knowledge and growth as individuals. Before observing and leading children's sessions, they would participate in adult sessions geared to call attention to how they themselves had learned. The discussion questions used in the subsequent series of adult Grouptalk sessions would also be chosen to enhance the student teachers' self-insight and knowledge of children. The same rationale applies here as in the training of T-Group leaders and psychoanalysts, even though Grouptalk technique is considerably simpler than either of these: future practitioners must become participants first because the personal learning and growth which can take place through active exposure to the technique are necessary ingredients in the effective use of it.

Two additional features of the Grouptalk training procedure were expected to contribute to its educational significance: (1) opportunities to observe and discuss procedures followed by a trained Grouptalk leader, and (2) individual conferences which would follow as soon as possible the session that had been led to provide feedback on the student's own leadership performance. The pedagogical value of this type of critical appraisal has been experimentally documented in the studies of Dwight W. Allen, et al. (1966) on the effects of feedback and practice on the acquisition of a teaching strategy, and in the studies of Michael E. J. Orme, et al. (1966) on the effects of modeling and feedback. By the end of the term, if the Wheelock students thought they had learned how to handle small groups more effectively, an increase in their self-confidence in the teaching role would be the natural outcome of the skill they felt they had acquired in leading Grouptalk sessions. An increased sense of competence due to actual experience would match the increase in understanding that observation alone might have yielded. The training would be an example of the episode teaching method recommended by Lundy and Hale (1965).

c. Previous Experience in Student Teacher Training. – My earlier work in training student teachers to lead Grouptalks was encouraging. During the first part of the academic year, 1966-67, two Wheelock students under my direction conducted a series of twenty Grouptalks with the second graders in their classrooms. In the spring term of that year two students from another college working at the fourth grade level also learned how to become Grouptalk leaders. Their college supervisors, the staff at the Underwood School and the student teachers themselves felt that the technique had enabled them to gain rapidly new insights about themselves, the children, and their relationship to the children. Their adult Grouptalk sessions provide opportunities for growth: when the student teachers analyzed their student teaching experience they came to the decision that their master teachers had given

them adequate supervision, that it had been their own insecurities which led them to unrealistic expectations that the master teachers would provide far more specific type of guidance. Differentiating their own concerns from the children's also helped make the student teachers feel more a part of the adult world and strengthened their self-confidence in their authority roles. Listening to second graders discuss the question, "Why do we need families?" made it clear to these college seniors that the children's preoccupations with the family were drastically different from their own. Other Grouptalks led to further insights which the student teachers could relate to the classroom.

Experienced teachers also led Grouptalk sessions. They commented that the sessions helped them understand particular children better than had been possible in the classroom situation, even though their policy was to make frequent use of small group and individual teaching. Children, freed by the rules of Grouptalk from the constraint of trying to give the "correct" answer and encouraged to communicate with the other children in the group rather than with the teacher, had expressed themselves in unexpected ways. Experienced, sensitive teachers who led Grouptalk sessions saw emerge abilities and facets of personality of which they had previously been unaware, and felt they could put this knowledge to use in the classroom.

## C. METHODS

1. Selection of Subjects The exploratory study was tailored to fit into the current teacher preparation program of the College. During the sophomore year Wheelock students observe young children in either a classroom or other institution in which care of young children is involved. For ten weeks in the last part of the junior year, then again in the first semester of the senior year, the students are given more responsibility as apprentice teachers. Usually they undertake an independent study. There are conferences at frequent intervals with the cooperating teacher and the supervisor from the college to help the student teacher evaluate her classroom experience. In addition, the supervisor holds weekly seminars with her dozen or so students to take up general and specific aspects of the curriculum and to supplement what is being learned in the classroom.

Dr. Alma Bent generously agreed to incorporate the exploratory teacher training project into her unit of this educational curriculum for two successive terms. This meant a total sample of twenty students. Half of the ten student teachers in each group she supervised, or ten in all, learned Grouptalk technique during the time they were apprentices in the first, second or third grade at the Underwood Elementary School in Newton.* The control groups, the other five members in each of

*The decision to provide the Grouptalk training at this particular school was made because the technique had been developed there. Both the administration and the staff were familiar with Grouptalk and actively encouraged cooperation in a research project which would involve children's participation in Grouptalk sessions led by Wheelock College students.

Dr. Bent's two seminars, were apprenticed in grades one through three at other elementary schools in Newton having a comparable educational philosophy. This arrangement for the control groups meant they had no contact with Grouptalk – their classmates were strictly enjoined to silence and kept it – but they shared the same supervisor. They were also asked to undertake an individual study that involved working with a small group of children. Hence, in other respects, their teacher training experience was comparable. The students teachers do not represent a random selection even from the Wheelock College population. Both groups of ten students supervised by Dr. Bent were mostly girls who had elected to work in the primary grades in Newton. At the time of starting their preference they knew nothing about a research project, but, when told about it, all agreed to participate. Although assignment to the experimental and control groups was largely on the basis of ease in arranging transportation, strong student preference for a specific school assignment was honored.

To provide some check on the comparability of our experimental and control groups, I collected demographic data from each of the students on a standard form (cf., Appendix I). Additional means of assessing the equivalence of the experimental and control groups are provided by the pre-tests, described below, which formed the baseline for estimates of change during the experimental period. These data indicate that the two control groups were slightly superior in teaching competence to the two experimental groups at the beginning of the term.

2. Grouptalk Training Procedure The student teachers' first exposure to Grouptalk consisted of two adult sessions. The manner in which I initiated them suggested the model to be followed with the second graders, not the model appropriate for use with adult groups. Both the teaching technique and the discussion topic for the second session ("How are the rules of Grouptalk learned?") were intended to encourage the student teachers to think about how children's learning might be compared with their own.

Following the first two sessions, the student teachers read my 59 page mimeographed manual (Whipple, 1969), which describes Grouptalk, with particular emphasis on its use in the primary grades. The original plan – to have them listen next to tapes of previous second grade Grouptalk sessions – was abandaned because of scheduling difficulties. Instead, each student teacher's first exposure to a children's session was when she watched me lead her group (four or five children) in their first Grouptalk session. Because Grouptalk is not appropriate for children in the first grade, and a large percentage of the children in all of the third grades at the Underwood School had participated in Grouptalk sessions the previous year, we formed groups with all the children in a single second grade classroom, one to which no student apprentice in the experimental group had been assigned. Thus, for the most part, contact between the children and the student teachers was limited to the Grouptalk sessions. Soon after each of the children's first Grouptalk session, the student leader and I met in conference. Xeroxed copies of her transcription of the tape of this Grouptalk session were distributed to the other student teachers, as were transcriptions of all of the adult Grouptalks.

Thereafter, the student teachers met with their second graders for six sessions, each followed as soon as possible by a conference with me. We listened to parts of the tape, talked about the individual children, their interaction in the group, and the student teacher's leadership technique. Each week a different student teacher transcribed her tape for circulation to the others. Sometimes the transcriptions were used in conjunction with the adult Grouptalk sessions. There were seven of these, generally with topics relevant to Grouptalk procedure and classroom problems (cf. Appendix II). Except for two sessions with the first experimental group when Dr. Bent took charge, I led all adult sessions. When the student teacher had completed the series of six sessions with her group, she visited their classroom for the first time to observe the children in that situation and to collect information from their teacher about their abilities and performance. At the end of the term, armed with numerous transcriptions, tapes, instruction manual and a variety of experiences with Grouptalk, the students consolidated their learning by writing a final paper covering four topics: (1) what the individual children had learned from Grouptalk, (2) changes that had taken place in the structure of the children's group, (3) what the student had learned about children, and (4) changes that had taken place in her self-image as a teacher.

3. Control Group Assignment In order to provide parallel experience in working with small groups, Dr. Bent asked the student teachers in the control groups to undertake an individual study project in which they would "give special attention to a pre-selected group of four to five children" — an appropriate request, since she usually makes reference to small groups in her curriculum seminars. To facilitate our assessment of what the experimental groups had gained from Grouptalk, which was their special study project, the students in the control groups also undertook an activity that would enable them to write a final paper which, in addition to giving an account of their project, would answer four questions equivalent to those assigned at the beginning of the term to the experimental groups. In other words, from the beginning we emphasized the importance of the final paper, specified the topics it would cover, and tried to direct the control groups toward an individual project which would involve working with children in a small group.

4. Evaluation: Basic Assumptions The person who evaluates a teacher training project should state as clearly as possible his conception of the ideal teacher before describing the tools used to measure change. Suppose the teacher training project helps produce better teachers. Just what does 'better' mean? In what way is the person closer to being an ideal teacher? The assumptions of Sorenson and Gross (1967) are, I believe, correct:

> that a teacher may be said to be "good" only when he satisfies someone's expectations, that people differ in what they expect from teachers, and that a scheme for evaluating teachers or for predicting teacher effectiveness must take those differences into account. (p. 1)

My judgments about teachers do not intentionally relate to the three categories of expectations postulated by these authors, which they label

noninstructional variables, i.e., the teacher's relations with his superordinates, his manner and appearance, or his managerial and housekeeping skills. However, the three instructional variables which they postulate are basic to my evaluation of primary school teacher excellence, and my preference for one over another of their subcategories is clear. In terms of their categorizations, my beliefs can be stated as follows: (1) In his educational objectives, the good teacher gives "priority to such matters as the effect of the instructional process on the pupil's self-esteem or his willingness to engage in problem solving, and must avoid inducing anxiety or dislike of school." (p. 7) The acquisition of knowledge, although important, is not the only or major goal of teaching. Although the good teacher transmits social values necessary for responsible, participating citizenship, effective learning comes from facilitating personal growth rather than from teaching children to parrot social conventions. (2) To achieve his educational objective, the teacher should emphasize "the processes by means of which knowledge in a particular discipline is created" (p. 8) and subordinate the content of the discipline, adopt the "Discovery" rather than the "Didactic" role. (3) The interpersonal style of the good teacher is informal, friendly and non-punitive, rather than impersonal and rigid. I would add to their description of good interpersonal style both the dimension of clarity and consistency of demands.

My judgment of excellence in a teacher also is in harmony with the point of view expressed by Strom and Galloway (1967). They reject the aim of trying to identify the "good" teacher in favor of identifying the "better" teacher, using the teacher himself as the prime reference for judgments of self-success, i.e., the teacher's awareness of improvements in achieving his own instructional intentions. Evaluations of teacher excellence thus should also take into consideration evidence of growth on the part of the teacher toward his own ideal of the teacher's role. The tools used in this study to evaluate changes in the student teachers assume that 'good teacher' is to be defined according to these expectations.

There are three additional assumptions which affected my selection of the evaluation devices. One is that although the normal procedure for training Wheelock College students during their apprenticeship in their junior and senior years helps prepare the students to be good teachers in the above sense, it is effective to an unpredictable extent, because of the complexity of the interactions between the student's personality and ability and that of the classroom teacher. Student teaching is believed to be more beneficial when the temperament and educational philosophy of the master and student teacher are in harmony. If the student teachers in both the experimental and control groups are therefore expected to show unpredictable degrees of change in the same direction — presumably all girls would show some improvement as a result of their apprenticeship — then the effect of Grouptalk training could be detected only by especially sensitive measuring tools. Standard quantitative tests probably would be inappropriate. New ones would have to be devised.

Although direct measurements of teaching ability, would have been enormously useful, such as might have been obtained by observations

of the student teachers in their first year of teaching, follow-up studies of this type were out of the question. I assume, therefore, that in evaluating the addition of Grouptalk training to the curriculum 'contributes to teacher preparation' means 'improves the teaching potential of a student', which is not necessarily synonomous with 'affects student teacher performance', although one anticipates there would be a high correlation between improved potential and excellence in performance in subsequent years. Furthermore, it is clearly inappropriate to assume that one can make reliable judgments of teaching ability when it is demonstrated by conducting a lesson in a master teacher's classroom. My measuring tools thus include intuitive projections based on my estimates and the students' self-estimates of change in teaching potential, in addition to the cooperating teachers' and Dr. Bent's ratings of teaching potential and performance in the classroom.

The final assumption of the evaluation procedure is that no single valid objective test of teaching potential or excellence exists or can easily be devised with the sensitivity requisite for our purposes. Bjerstedt (1967), who is in the process of constructing a battery of better tests based on an interaction-oriented approach, comments:

> The difficulty of predicting teaching effectiveness has been well known among educational research workers for a long time, and the amount of research directed at this problem has been impressive. Unfortunately, the results emerging from this research have been less than impressive and, in many cases, of no practical value at all. (p. 339)

Therefore, I have relied on a battery of five highly subjective measurements and one objective type. The appropriate statistical analyses are simple and descriptive. I have not calculated significant differences because the data do not warrant such attempted precision and to do so would be misleading.

The selection of the tools for evaluating the project clearly exemplifies the well known tendency of social research to yield conclusions that support the biases and value judgments of the experimenter. In his characterization of all social research, Muzafer Sherif (1970) concludes, "In effect, the researcher stages his own scenario." (p. 146) But by making his biases as explicit as possible, the experimenter can often help others achieve an independent evaluation. I hope the presentation of this report will enable the reader to reach his own conclusions about the value of instruction in Grouptalk as a teacher training instrument.

In short, in trying to answer the question, Does Grouptalk training help make better teachers? we assume agreement on the meaning of 'good teacher' and we also assume a high correlation between teaching potential and teaching ability. Finally, we assume that classroom teaching ability (observable only after graduation when the student has a class of her own) is a function of teaching potential plus experience and that supervised classroom teacher training during the term of apprenticeship can contribute to both. The evaluation tools needed for this project therefore must be able to pinpoint what Grouptalk adds to a student teacher's teaching potential and experience, as distinct from

what other apprentice learning situations contribute. It does not help to measure the anticipated growth in teaching potential between the beginning and the end of the term. We must be able to measure the specific change which Grouptalk makes in the overall growth in teaching potential.

5. Evaluation: Procedure Followed Since Grouptalk, although broadly classified as a language arts study, does not teach content, we can exclude from the outset measures of proficiency in subject matter. We can also exclude measures of teaching potential which rely heavily on basic personality factors, because Grouptalk training does not affect these. Instruments were chosen which measure changes: (1) in the student teachers' educational objectives, (2) in their teaching techniques, and (3) in their teaching styles.

Six different types of data, described below in detail, were collected to help evaluate the contribution made by Grouptalk training to the student teachers' preparation. The final paper which all of the students wrote about their special project I considered the most important single source of information. In addition, all of the girls took two tests: Freeze's College Student Problems Q-sort (cf., Appendix III) and Whipple's Student Teacher Paragraph Completion Test (cf., Appendix IV) before beginning their ten weeks' student teaching experience and again on the last day of the term. The cooperating teachers and Dr. Bent, using the form in Appendix V, rated the students at the end of their first week in the classroom on their expected performance as student teachers and then rated them again on performance during the latter part of the student teaching experience. Ratings on Grouptalk leadership provided a fifth source of data. I rated the students first on the basis of performance in the first Grouptalk session which they led, then again on the quality of leadership shown in their last sessions with the same children. The dimensions of rating are described in Findings, D. (All of the ratings reported in this study are on a five point scale from a low of one to a high of five). Finally, the content of many of their adult Grouptalk sessions was examined for changes in the experimental groups' thoughts and feelings about teaching.

a. Final Paper. — All students knew at the beginning of the term that the special project for Dr. Bent's course would involve writing a final paper. The girls in the experimental groups were told that their paper should answer four questions: (1) What do you think the individual children in your group have learned from their participation in Grouptalk?, (2) What changes took place in the group relationships from the children's first to their last sessions?, (3) What has the Grouptalk project contributed to your understanding of children?, and (4) Are there changes in your self-image as a teacher that you can attribute to your experience with Grouptalk?

Since the students in the control groups each pursued an individual study in their own classrooms, they were asked first to describe the nature of their special project, then to answer four basically equivalent questions. Both Dr. Bent and I explained the assignment at length when handing out the mimeographed instructions and again several

times just before the students began writing their final papers, making every effort to ensure coverage of the four areas in which the groups would be compared.

The first topic, What did the children learn from the special project? was included for two reasons: primarily because it encouraged the student teacher to focus on the individual child and his potentialities, but also because I thought the study could be used to support previous impressions of the pedagogical value of Grouptalk training for children at the second grade level. The experimental group, I hoped, would mention affective as well as cognitive aspects of children's learning, regardless of whether or not they thought changes had occurred.

The second area of concern — changes that took place in group relationships — would be handled quite differently, I anticipated, by the experimental and control groups. The student teachers in the experimental groups would look at group dynamics quite closely and describe the children's interactions with a sensitive understanding of factors leading to the degree of cohesion that had been achieved. The control students, on the other hand, would show less interest in and understanding of group dynamics. Furthermore, whatever evidence might be available would indicate less awareness of specific ways in which a group leader's behavior affects children's interactions.

It might be harder to evaluate statements about what students' projects had contributed to their understanding of children. Presumably, everyone would say that they learned something. The very nature of the writing assignment might even lead them to exaggerate a little. Yet I very much hoped that careful reading of the final papers would enable the reader to separate fact from fiction. If the Grouptalk experience had its anticipated effect, there would be more emphasis in the experimental groups on developmental characteristics of the particular group observed — they would feel they knew more than they had previously about the thoughts, feelings and capacities of children of that particular age.

Small changes in the student teachers' self-image in the direction of greater self-confidence were anticipated in both the experimental and control groups. Their individual projects had given them all the opportunity to take the responsibility of teaching a small group of children and, as a result, one would expect the teacher's role to seem more natural. But, hopefully, the instruction in Grouptalk technique would make a larger contribution in this respect. It would also, I expected, make a qualitative difference: the student teachers in the experimental groups would be much more inclined than previously to see themselves in the role of teacher as a resource person rather than as a dispenser of information and facts, and more apt to place a high value on small group discussion, particularly when peer-oriented.

b. Adult Grouptalk Sessions. — Since the discussion question selected for six out of the seven adult Grouptalk sessions in both experimental groups related in some fashion to teaching (cf. Appendix II), much of the content of these sessions is relevant to an assessment of what the student teachers gained from their Grouptalk training. No

comparisons can be made with comparable discussions among the students in the control groups for none were held. But the transcripts of the adult sessions serve as an additional source of information, which should corroborate the conclusions reached from reading the final papers of the experimental groups. Discussion of the question, "What has Grouptalk taught you about children?" for example, would be expected to cover some of the same ground as the students' treatment of the topic, "What has the Grouptalk project contributed to your understanding of children?"

c. Ratings of Grouptalk Leadership. — On the basis of listening to tapes — I was never present while the student teachers led their sessions with the children — I derived a score for Grouptalk leadership performance (cf., Findings, D). This overall rating on a five point scale (poor to excellent) is the average of the ratings assigned on six variables, each of them rated on a five point scale.

My expectation was that all students would improve in their ability to lead Grouptalks as a result of increased familiarity with the technique, that their ratings at the end would be higher than at the beginning — even though the skill involved in leading the sixth session successfully is greater than that required for leading the second. Admittedly, the skill gained in leading a particular type of small group discussion — Grouptalk — might not necessarily have a direct bearing on classroom management. But presumably, it would be a step in the right direction: at least the student teacher should be better prepared to lead small group discussions in the classroom.

Some learning, I anticipated, would not be reflected in these leadership ratings. It is important to remember that they are ratings of actual performance in leading groups of varying degrees of difficulty. Significant learning could result from having a difficulty group which the student teacher could not handle effectively.

d. Student Problems Q-sort. — This test devised by Freeze (1963) provides a validated measure of openness to experience, a variable presumably related to teaching excellence in the sense in which it is understood here. After Rogers postulated a personality continuum from "closedness to experience" to "openness" and showed that this variable was related to successful therapy, several investigators explored the usefulness of the concept in the field of education. Bills, et al. (1964) summarize these efforts:

> There appear to be direct relationships between the openness of a teacher to his experience, both past and present, his judged teaching success, his effect on attitudes toward self and others of pupils, the locus of responsibility for decision making within his classrooms, his ability to change in a learning situation, and the quality of the helping relationships he offers pupils. (p. 1)

Bills and his co-workers continued the research first reported by Freeze on changes in openness scores of student teachers before and after their student teaching experience and found, as he had, that significant

negative change occurs during this period. This undesirable result is interpreted as a function of tension producing aspects of the student teaching situation. Bills, et al., suggest a variety of ways these tensions might be alleviated, many of which coincide with the conditions present during Grouptalk training. It therefore seemed worthwhile to investigate the relationship between openness scores and Grouptalk training, and include, as the previous investigators had done, Q-sort scores of the cooperating teachers (cf., Appendix VII). Use of these tests could provide a relatively clear-cut, objective way of documenting one possible contribution of Grouptalk to the Wheelock teacher preparation program: a reduction of some of the tension producing aspects of the student teaching situation.

e. Teacher Ratings. — The rating form set up for the project (cf., Appendix V) consists of three parts: (1) a list of personality traits and abilities said to be associated with excellence in female teachers (Gough, Durflinger, and Hill, 1968), (2) skills related to Grouptalk leadership, and (3) an overall assessment of the student teacher's performance in the classroom. All ratings are on a five point scale. Because I differentiated characteristics that were and were not expected to be influenced by Grouptalk training, I hoped that the ratings in categories (2) and (3), made at the beginning and at the end of the training experience by Dr. Bent and the cooperating teachers (especially if there were close agreement between the paired judgments), would help demonstrate the contribution of Grouptalk to the student teacher's preparation. The additional ratings that Dr. Bent and the cooperating teachers made of the student teachers' teaching ability, using the standard Wheelock and Newton Public School forms, could provide some check on reliability. Clearly, however, even highly reliable data would have to be interpreted with caution: the final ratings are based on observations of performance before the special Grouptalk training had been completed. Also, since the teaching was done in the cooperating teacher's classroom, the performance was not always the student's best: some of them felt obliged to conduct the lesson in accordance with the teacher's wishes and not as they would in their own classroom.

f. Student Teacher Paragraph Completion Test. — This unstandardized projective test (cf., Appendix IV) was designed to measure student teacher's beliefs and feelings in the area of teaching that might be affected by exposure to Grouptalk technique. It consists of five incomplete paragraphs describing a hypothetical situation in an elementary school. The student teacher is asked to finish them: "State how you think you would feel in that situation, the thoughts you might have and the actions you might take." There are two ways of scoring the responses. One method of scoring yields quantitative ratings on a five point scale on one or two dimensions for each of the five incomplete paragraphs. This means that group comparisons can be made on initial attitudes and beliefs as well as on changes for each of the dimensions rated. The second method of scoring, based upon a comparison between the content of the responses of an individual before and after the student teaching experience, results in an individual profile rich in information but not amenable to use in group comparisons.

If we assume this projective test does provide sensitive, valid measures, and Grouptalk training does accelerate the growth process towards becoming a good teacher, then we would expect to find greater differences between the test and re-test protocols of the experimental than of the control groups, i. e., more evidence of growth. In the commitment to teaching there would be more emphasis on reality, less on idealistic factors, more security in the authority role. The objectives of teaching would be stated more clearly and concretely in terms of the development of individuals within a group context. The teacher would be seen more as a resource person, less as a dispenser of factual knowledge; as a person who gives structure to the classroom in a non-punitive way. Finally, awarness of thoughts and feelings of others would also increase more.

g. Subjective Assessment. — It was our anticipation from the outset that in the final analysis Dr. Bent and I, and hopefully the reader also, would intuitively weigh results from the various types of data described above to arrive at firm and similar conclusions about the usefulness of Grouptalk technique as a teacher training instrument.

## IV. FINDINGS

Six different types of data, as we have seen, are relevant to the central question posed in the exploratory study, Does training in Grouptalk technique add significantly to the preparation of student teachers? The presentation of the findings begins with the more objective, albeit less informative, sources of information, and ends with the student teachers' final papers, which communicate the most. The most convincing way to report the data certainly would be in terms of individual profiles. The effect of introducing Grouptalk training is seen most clearly in case histories which can take into account all the complexities of the student teaching situation. However, this method of presentation with a sample as small as ours, would trespass on the student teachers' rights of privacy. I have carefully kept the anomymity of the students protected at the expense of optimal presentation of the data by assigning different numbers to the students in each of the following sections, making it impossible to trace individual profiles.

### A. STUDENT PROBLEMS Q-SORT

Freeze's Student Problems Q-sort, which yields openness scores for student teachers, presumably measures a quality of personality correlated with teaching excellence and mental health. It was my hypothesis that any clear cut variation from the findings of previous investigators, i.e., that openness tends to decrease during student teaching, would indicate the value of the teacher training procedures followed at Wheelock College by reducing anxiety associated with student teaching. Furthermore, if there were differences between the experimental and control groups, this would provide some basis for evaluating the effectiveness in reducing anxiety of adding Grouptalk training to the student teaching program.

At the outset, the experimental and control groups differ only slightly in openness – +18.4 versus +20.6. Both groups are moderately high in openness on a scale which ranges from -64 to +64 (cf. Table 1). The junior control students have a higher average score (+21) than the junior experimental group (+12.2), but the relationship is reversed for the seniors (24.6 for the experimental group versus 18.2 for the control students).

Unfortunately the data on differences on Q-sort scores before and after student teaching do not yield clear cut results, as inspection of Table 2 shows. The average change is positive for one experimental group (+3.0), negative for the other (-5.3). The same is true for the two control groups (-3.8 and +7.4). The variability is high in all four. A tendency toward positive changes in the control groups and toward negative changes in the experimental groups might be inferred if we could remove from consideration the two students who have an extremely large difference in the pre-teaching and post-teaching test scores (+30 and -18). But what reasonable justification is there for doing this?

TABLE 1. — Q-Sort Scores of Student Teachers in Experimental and Control Groups at Start of Student Teaching

| Experimental group | | Control group | |
|---|---|---|---|
| Student | Q-sort score | Student | Q-sort score |
| Group I (juniors) | | | |
| #1 ..... | 8 | #11 ..... | 4 |
| 2 ..... | 25 | 12 ..... | 27 |
| 3 ..... | 23 | 13 ..... | 17 |
| 4 ..... | 14 | 14 ..... | 32 |
| 5 ..... | - 9 | 15 ..... | 25 |
| Average ..... | +12.2 | | +21 |
| Group II (seniors) | | | |
| #6 ..... | 38 | #16 ..... | 15 |
| 7 ..... | 23 | 17 ..... | 27 |
| 8 ..... | 25 | 18 ..... | 32 |
| 9 ..... | 22 | 19 ..... | 6 |
| 10 ..... | 15 | 20 ..... | 11 |
| Average ..... | +24.6 | | +18.2 |
| Average (I and II) | +18.4 | | +20.6 |

TABLE 2. Changes in Openness Scores of Student Teachers After Ten Weeks' Student Teaching

| Experimental group | | Control group | |
|---|---|---|---|
| Student | Change in openness score | Student | Change in openness score |
| Group I (juniors) | | | |
| #1 ..... | - 4 | #11 ..... | + 1 |
| 2 ..... | - 7 | 12 ..... | + 1 |
| 3 ..... | - 5 | 13 ..... | + 2 |
| 4 ..... | + 1 | 14 ..... | -18 |
| 5 ..... | +30 | 15 ..... | - 5 |
| Average ..... | + 3.0 | | - 3.8 |
| Group II (seniors) | | | |
| #6 ..... | - 8 | #16 ..... | + 8 |
| 7 ..... | + 6 | 17 ..... | +15 |
| 8 ..... | -11 | 18 ..... | + 2 |
| 9 ..... | -10 | 19 ..... | + 1 |
| 10 ..... | - 3 | 20 ..... | +11 |
| Average ..... | - 5.3 | | + 7.4 |
| Average (I and II) | - 1.2 | | + 1.8 |

It is interesting to note in passing that almost all of the Wheelock students in both the experimental and control groups in the two testing situations indicate extremely low concern with nagging and pressure from their parents to make good grades, but classify the following items as extremely pressing problems:

#38. Learning what is most important for me to do, to be, or to get from life.
#63. Continuing to learn more about myself and what is important to me.
#66. Growing in my abilities to evaluate my needs.

It is tempting to conclude from the Q-sort data that the Wheelock College student teacher training program does not influence emotional maturity. I would prefer to conclude either that because we are dealing with such a small sample, both the raw scores and group averages are misleading, or preferably that the validity of the test is questionable.

Close examination of individual item changes shows enormous variability for all twenty students. These changes are not reflected in the final scores, however, because they cancel out. Almost a third of the 84 items change in sign value (open to closed, or vice versa); nine of these are migrations from one extreme end of the Q-sort to the other. These changes indicate either that something important has happened, that the students' perceptions and problems have indeed been affected by their student teaching experience even though no other evidence for this exists, or else that the test does not give reliable measures. It is also possible that the population on which it was standardized differs markedly from ours.

Whatever the reason, conclusions drawn from the Student Problems Q-sort must remain inconclusive. It is therefore futile to relate changes in openness scores of student teachers to those of their cooperating teachers, as we had anticipated doing (cf., Appendix VII).

## B. TEACHER RATINGS

The ratings which Dr. Bent made at the beginning and end of the student teaching experience of each of the twenty student teachers, using the rating form in Appendix V, provide a numerical evaluation of their performance as student teachers and their teaching potential. Her ratings assure more uniformity in frame of reference for the judgments than use of the cooperating teachers' ratings would supply. There is a high degree of correspondence between the two, however. Analysis of the relationship between them leads to the conclusion that Dr. Bent's ratings are more suitable for this study and perhaps have higher validity – divergence between the two is greater at the beginning than at the end, with shifts in the ratings of the cooperating teachers going in the direction of Dr. Bent's.

1. Beginning Status What then do her ratings show? Ratings made at the end of the first week of student teaching are helpful in assessing the equivalence of the experimental and control groups. Although her

initial impressions indicate that the two groups were similar on ratings of isolated traits, e.g., affectionate, logical, etc., on more global characteristics, e.g., resolute in pursuing goals, open to new experience, ability to guide small groups, etc., and on the overall ratings of probable performances as student teachers and teachers (cf., Table 3), the two control groups are slightly higher in both categories. This slight initial superiority in the teaching potential of the control group also shows up in other comparisons between the groups, such as confidential ratings by the cooperating teachers on "Beginning Status" on the "Student Teachers Progress Report" for the Newton Public Schools.

TABLE 3. — Supervisor's Ratings of Student Teachers after one Week of Student Teaching on Probable Performance as Student Teachers and Ultimate Teaching Potential

| Experimental group | | | Control group | | |
|---|---|---|---|---|---|
| Student | Probable practice teaching performance | Ultimate teaching potential | Student | Probable practice teaching performance | Ultimate teaching potential |
| Group I (juniors) | | | | | |
| #1 ..... | 4 | 4 | #11 ..... | 4 | 4 |
| 2 ..... | 4 | 4 | 12 ..... | 4 | 4 |
| 3 ..... | 3 | 3 | 13 ..... | 4 | 4 |
| 4 ..... | 4 | 4 | 14 ..... | 5 | 5 |
| 5 ..... | 4 | 4 | 15 ..... | 3 | 4 |
| Average ..... | 3.8 | 3.8 | | 4.0 | 4.2 |
| Group II (seniors) | | | | | |
| #6 ..... | 4 | 4 | #16 ..... | 5 | 5 |
| 7 ..... | 3 | 3 | 17 ..... | 2 | 3 |
| 8 ..... | 3 | 3 | 18 ..... | 5 | 4 |
| 9 ..... | 5 | 4 | 19 ..... | 5 | 5 |
| 10 ..... | 4 | 4 | 20 ..... | 4 | 4 |
| Average ..... | 4.0 | 3.6 | | 4.2 | 4.2 |

2. Effect of Student Teaching What do the ratings tell us about the student teachers' progress during their apprenticeship? Dr. Bent's initial ratings provide a useful baseline for measurements of change, since she rated the students again at the end of the term.

Ratings on isolated personality traits changed, but very little, indicating either that the student teachers changed in their behavior somewhat or were seen in a slightly different light after further observation. Since these changes occur in the ratings for all four groups and are small, they can be disregarded as irrelevant to evaluations of Grouptalk training. Indeed, the construction of the rating form was predicated on the assumption that these isolated personality traits would not be influenced by the student teaching experience.

Changes in ratings of global personality characteristics, which had been included because they might indicate an effect of Grouptalk training, are indicated in Table 4. The data make it clear that there is no overall difference that can be attributed to Grouptalk training: the average gain of the experimental groups (+0.5) is close to that of the control groups (+0.4). Even on "ability to guide small groups" the gains are the same for the experimental and the corresponding control groups (+1.4, +1.2, and +0.8, +0.8).* The juniors in both groups on the average gained more (+0.8 and +0.5) than the seniors (+0.2 and +0.3), a not unexpected finding. However, it is somewhat puzzling to find negative scores, i.e., lower ratings at the end than at the beginning of the term. Comparison with similar ratings on the Newton Public School forms, where "Initial Status" and "Present Status" are checked simultaneously at the end of the term, suggests that the findings are misleading – some teachers indicated on the Newton form that there had been no progress, but none said the student teachers retrogressed!

TABLE 4. – Average Group Scores and Gains on Ratings of Six Global Personality Characteristics After Student Teaching

| Global personality characteristic | Experimental group | | | | Control group | | | |
|---|---|---|---|---|---|---|---|---|
| | I Juniors | | II Seniors | | I Juniors | | II Seniors | |
| | Score | Gain | Score | Gain | Score | Gain | Score | Gain |
| 1. Open to new experience | 3.4 | +0.4 | 3.2 | -0.2 | 3.2 | -0.2 | 4.2 | -0.2 |
| 2. At ease with children | 3.6 | +0.8 | 3.6 | +0.4 | 3.6 | +0.4 | 4.6 | -0.2 |
| 3. Ability to guide small groups | 3.0 | +1.4 | 3.0 | +0.8 | 2.6 | +1.2 | 3.6 | +0.8 |
| 4. Appropriateness of demands on ... | 2.6 | +1.0 | 3.0 | 0 | 3.0 | +0.6 | 3.8 | +0.6 |
| 5. Helps children take responsibility for ... | 3.0 | +0.6 | 3.0 | 0 | 2.6 | +0.6 | 3.6 | +0.2 |
| 6. Consistency in management | 2.6 | +0.6 | 2.8 | +0.2 | 2.8 | 0 | 3.6 | +0.6 |
| Average score | 3.0 | | 3.2 | | 3.0 | | 3.9 | |
| Average gain | | +0.8 | | +0.2 | | +0.5 | | +0.3 |
| Average gain (Exper. vs. Control) | +0.5 | | | | +0.4 | | | |

*In this connection it is important to state that comparisons between what the cooperating teachers of the experimental and control groups wrote in their qualitative comments on the Newton Public School form for rating student teachers suggests a different picture, i.e., that many students in the control groups were more in need of group leadership skills than in the experimental groups.

Because of the nature of the rating task, the findings are ambiguous. We could conclude that rating these global characteristics was a difficult task when there was little evidence to rely on at the beginning of the term; but perhaps the final ratings would have been different had the initial ratings been available for comparison at the end of the term.

What about differences in anticipated performance as student teacher (rated at the beginning) and actual performance (rated at the end of the term)? Table 5 shows that the average performance in all four groups is not quite as good as Dr. Bent had expected it to be. Nine of the 20 student teachers did not do as well. Only three of the 20 students, two of them in the experimental groups, did better. The predictions assumed a certain degree of uniformity in the classroom situation. But some cooperating teachers were absent for long periods and several juniors were heavily preoccupied with college obligations associated with campus political unrest. Many factors could account for these differences between predicted and observed performance in the student teaching situation in addition to inadequate observations on which to base the predictions and unanticipated student growth.

TABLE 5. — Differences in Supervisor's Ratings of Anticipated and Actual Performance in Student Teaching*

| Experimental group | | Control group | |
|---|---|---|---|
| Student | Difference | Student | Difference |
| Group I (juniors) | | | |
| #1 ..... | 0 | #11 ..... | -1 |
| 2 ..... | -2 | 12 ..... | 0 |
| 3 ..... | +1 | 13 ..... | -1 |
| 4 ..... | 0 | 14 ..... | 0 |
| 5 ..... | -1 | 15 ..... | 0 |
| Average difference | -0.4 | | -0.4 |
| Group II (seniors) | | | |
| #6 ..... | -1 | #16 ..... | 0 |
| 7 ..... | 0 | 17 ..... | +2 |
| 8 ..... | +1 | 18 ..... | 0 |
| 9 ..... | -2 | 19 ..... | -2 |
| 10 ..... | -1 | 20 ..... | -2 |
| Average difference | -0.6 | | -0.4 |

*Differences between Supervisor's ratings at end of one week and 10 weeks are positive if the second rating was higher.

The shifts in the ratings of teaching potential are of greater interest because the direction was unanticipated (cf., Table 6). Seniors, on the average, are not rated as highly at the end of the term as they were at the beginning. Four of the ten students in the experimental group and two in the control group have lower ratings. Again, it is difficult to interpret these data as indicating less actual competence at the end of the period of student teaching than at the beginning. Perhaps there was

too much ambiguity in my request to rate "ultimate performance as a teacher" and perhaps the final ratings should have been made with the initial ones available for comparison.

TABLE 6. – Differences in Supervisor's Ratings of Teaching Potential before and after Student Teaching*

| Experimental group | | Control group | |
|---|---|---|---|
| Student | Difference | Student | Difference |
| Group I (juniors) | | | |
| #1 ..... | +1 | #11 ..... | 0 |
| 2 ..... | -1 | 12 ..... | 0 |
| 3 ..... | +1 | 13 ..... | 0 |
| 4 ..... | +1 | 14 ..... | 0 |
| 5 ..... | 0 | 15 ..... | 0 |
| Average difference | +0.4 | | 0 |
| Group II (seniors) | | | |
| #6 ..... | -1 | #16 ..... | 0 |
| 7 ..... | 0 | 17 ..... | +1 |
| 8 ..... | +1 | 18 ..... | 0 |
| 9 ..... | -1 | 19 ..... | -1 |
| 10 ..... | -1 | 20 ..... | -1 |
| Average difference | -0.4 | | -0.2 |

*Difference is positive if second rating was higher.

Another ambiguity concerns the comparability of juniors and seniors on this scale. For juniors, did the rating take into account the additional ten weeks period of apprenticeship they would have when they were seniors? Can one take into account the "average amount of progress expected" and make it mean the same thing for juniors and seniors? Another source of data suggests that this is inadvisable: the Newton Public Schools ask for ratings of the student teacher's readiness to teach on her own. In this context, the junior experimental group rate a little below average (2.8) and the control group a little above average (3.2). The senior groups are about the same (3.6 and 3.8), but both slightly higher than the junior groups.

'Teaching potential' and 'readiness to teach' clearly mean something different – but one would not expect a rating on either to go down after a ten week student teaching period! Since it is extremely difficult to make predictions on the basis of one or two observations at the beginning of a student's apprenticeship, perhaps Dr. Bent's judgments at the end of the term should be considered more valid. In general, Dr. Bent's confidence in her ratings was higher at the end of the term than at the beginning, as Table 7 shows. But her confidence increased mainly with regard to rating the two control groups (+0.8 and +0.6). At the end of the term, Dr. Bent is slightly less confident in rating both experimental groups (-0.6 and -0.2) than she was at the outset. Half student teachers in the experimental group are rated with less assurance at the end than at the beginning.

TABLE 7. – Supervisor's Confidence in her Ratings of Students before and after Student Teaching on Ultimate Teaching Potential*

| Student group | Supervisor's average confidence rating | | | | | |
|---|---|---|---|---|---|---|
| | Experimental group | | | Control group | | |
| | Before | After | Difference | Before | After | Difference |
| I (juniors) | 3.6 | 3.0 | -0.6 | 3.4 | 4.2 | +0.8 |
| II (seniors) | 2.8 | 2.6 | -0.2 | 2.8 | 4.4 | +1.6 |
| Average difference | | | -0.4 | | | +1.2 |

*Difference is positive if second rating was higher.

To summarize: two control groups, initially rated somewhat higher in teaching ability than the experimental groups, finish with ratings quite similar to the ones they had at the beginning. One experimental group is rated more highly after student teaching, the other has lower ratings on the average. But the rater's confidence in her judgments of the experimental groups is still low at the end, in contrast with the increased confidence she has in her ratings of the control groups. The quantitative data thus make it difficult to draw any conclusions about the effect of the experimental procedure on teaching potential. In fact, none of the data on ratings are sufficiently unambiguous to be useful in evaluating the exploratory study.

## C. STUDENT TEACHER PARAGRAPH COMPLETION TEST

Before and after the period of student teaching, five paragraphs (cf., Appendix IV) were presented to the students to complete in the expectation that the answers would be useful in assessing attitudes about and perceptions of the teaching situation. Since there was insufficient time to conduct preliminary tests with the Student Teacher Paragraph Completion Test, there was no assurance that it would be discriminating. Responses were scored on seven variables relevant to changes in attitude that might be produced by Grouptalk training. Assuming that the projective test was discriminating, I hoped that this analysis of the data would help answer the following questions: Would the experimental group show greater sensitivity to group dynamics, greater understanding of how to motivate children to learn, place more emphasis on the importance of children's discussions, especially peer-oriented ones? Would there be a greater degree maturity in these students' preception of their role as teacher? Would their views on classroom management change more?

1. Group Differences Two incomplete paragraphs, i.e., IP #2 and IP #4, yield no useful information about group changes. Most of the students in both of the experimental and control groups completed IP #2, about motivating children to learn, in much the same manner. Their opinions did not shift with time. IP #4, about reasons for teaching, led to such a wide variety of answers that no useful dimension of

analysis was applicable to all. The other three incomplete paragraphs, i.e., #1, #3 and #5, were helpful in detecting changes of opinion and did yield interesting group differences.

a. Incomplete Paragraph #1. — This paragraph begins as follows:

> A teacher with many years of experience in the classroom told her young apprentice to be very careful from the beginning not to let the second graders get the upper hand, "They cannot be trusted. Most of them enjoy scheming to embarrass or destroy you."* The student teacher considered this advice .....

Responses to this incomplete paragraph are scored on two dimensions: (1) sensitivity to the complex group dynamics in the situation — the interrelationships between the student teacher, the children, and the cooperating teacher, and (2) the student teacher's confidence in her own philosophy of education.

Table 8 shows that in the experimental groups there were altogether 12 shifts out of 18 possible positive shifts in attitude and only one negative shift, whereas in the control groups there were only three positive out of 16 possible positive shifts and two negative ones. No students in the control groups increased their scores on both variables, whereas four did in the experimental groups.

TABLE 8. — Final Ratings and Differences in Ratings after 10 Weeks in Responses to Incomplete Paragraph #1 — Scored for Sensitivity and Confidence*

| | Experimental group | | | | Control group | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Sensitivity | | Confidence | | Sensitivity | | | Confidence | |
| Student | Rating | Diff. | Rating | Diff. | Student | Rating | Diff. | Rating | Diff. |
| Group I (juniors) | | | | | | | | | |
| #1 ..... | 4 | +3 | 4 | +3 | #11 ..... | 4 | 0 | 4 | +4 |
| 2 ..... | 5 | +1 | 4 | 0 | 12 ..... | 1 | 0 | 1 | 0 |
| 3 ..... | 1 | 0 | 4 | 0 | 13 ..... | 1 | 0 | 5 | 0 |
| 4 ..... | 1 | 0 | 4 | +1 | 14 ..... | 4 | 0 | 2 | 0 |
| 5 ..... | 5 | 0 | 5 | 0 | 15 ..... | 5 | 0 | 2 | 0 |
| Average final rating | 3.2 | | 4.2 | | | 3.0 | | 3.4 | |
| Average difference | | +0.8 | | +0.8 | | | 0 | | +0.8 |
| Group II (seniors) | | | | | | | | | |
| #6 ..... | 3 | 0 | 5 | +1 | #16 ..... | 1 | 0 | 2 | 0 |
| 7 ..... | 3 | +2 | 5 | +1 | 17 ..... | 1 | 0 | 4 | 0 |
| 8 ..... | 1 | -1 | 3 | +2 | 18 ..... | 4 | -1 | 4 | 0 |
| 9 ..... | 5 | +4 | 5 | +1 | 19 ..... | 5 | 0 | 4 | 0 |
| 10 ..... | 4 | +1 | 5 | +1 | 20 ..... | 2 | -3 | 4 | +1 |
| Average final rating | 3.2 | | 4.6 | | | 2.6 | | 3.6 | |
| Average difference | | +1.2 | | +1.2 | | | -0.8 | | -0.2 |

*Difference is positive if second rating was higher.

*The quotation is typical of letters of advice to beginning teachers found in a professional journal.

The following excerpts from two students' first and second protocols illustrate the change that was noted in the responses of five student teachers in the experimental group, i. e., increased sensitivity to group dynamics and the teacher's role in structuring situations that lead to trust:

Student # 7: In my teaching experiences I have found that children are open, honest, trustworthy, sincere, and have an innate hunger for knowledge. (First IP #1)

I have a strong belief that children can be trusted. However, this trusting of children does not mean a lack of your presence in establishing limits. Children need guidance, a sense of direction, and most important a feeling of security and fairness with a teacher. They want and need to feel a control and a trust. I think if you approach children with this attitude there would never be a situation of scheming or desire to destroy you. There would be a sense of mutual love, respect and understanding — on the part of the teacher and children. (Second IP #1)

Student #10: I won't let them get out of hand. I have always been a friend to children and feel that if I respect them, they will me ..... It has worked in the past and I would like to let my philosophy work for me in this class if it is all right with you. (First IP #1)

The student told her teacher that she realized that it was very important for the children to understand that what she says, she means and to establish her form of discipline from the start so that the children do not become confused as to what behavior is acceptable and what isn't. However, she also stated that she does think that they can be trusted if they have an understanding as to how she operated and if so, joined by the respect and friendship between herself and the students, they will have no cause to destroy her.

She tried to follow this up with conferences, etc., to try and understand why this teacher felt the way she did. (Second IP #1)

Other excerpts illustrate increased confidence in the student's own capacity to establish good relationships with children:

Student #8: The advice was a very upsetting comment for the beginning of an experience ..... I would attempt to be objective and make my own conclusions about the class, but I'm sure her comment would, unfortunately, remain in the back of my mind. (First IP #1)

I would question the validity and more important the motivation for her statement, and why she felt this was happening to her. In the beginning I might have this in the back of my mind yet I would attempt to not prejudge on her

personal experience. I would handle it as a new experience and assess their reaction to me as a teacher. I would hope to pretty much ignore this and make my own decision and observation. (Second IP #1)

These changes, so prevalent in the experimental groups, hardly occur in the control groups. Only two students in the control groups made a positive shift in one dimension, self-confidence:

Student #11: At first I might feel afraid of the children and wonder if I could be firm enough to get control of the classroom. On thinking about what the teacher had said some more, it would probably occur to me that she was a very hardened teacher and was being awfully harsh toward the children. I would think it best to be cautious when the teacher is around. She would probably not be happy at all if I became friendly with the students as that would make me seem to be against her. I would have to watch the class in action but would probably feel sorry for the children who had this harsh teacher. As much as possible I would observe closely the actions and facial expressions of the children in the first couple of times I was in the classroom, and I would have to try hard to work with the teacher and not to antagonize her until I understood the situation more fully. (First IP #1)

This teacher must be very insecure in her dealings with her children. Children can be trusted if they are given responsibility right from the beginning. Children are very frank and usually honest so that they may well at times embarrass you, but, often times, they can see a teacher's dishonesty behind it. This teacher will probably be a hard person to work with as she will probably be on the defensive with a student teacher who develops any rapport with the children; at the same time, the children probably need a good deal of understanding so that they can realize that a teacher can be a friend and is in the classroom to help them. (Second IP #1)

The second student whose self-confidence increased, (#20), seems, however, to have less concern at the end of her practice teaching for how the cooperating teacher would respond to her:

Student #20: I would be rather frightened by the idea of teaching in this classroom. It seems as if the teacher is more involved with controlling the class rather than teaching them or knowing them. I would feel though that I would have to not let the children get the upper hand because this is the way my cooperating teacher runs her classroom ..... I would try to find out why the teacher thinks the children cannot be trusted and the reasons for this. Also I think it is important for me to get to know the children as individuals and establish some kind of basic trust with them. I think

that by trusting each other fewer discipline problems would evolve. (First IP #1)

There was no basic trust relationship between the teacher and her pupils. I would try to establish some sort of trust with the second graders and myself. I do not think that I would believe the teacher in that the second graders were trying to embarrass and destroy me. This attitude is very negative and definitely destroys the chances of having any good, sound relationships with the children. I think it would be good to get to know the children, the classroom situation, and the teacher to find out exactly why she felt this way. (Second IP #1)

b. Incomplete Paragraph #3. — This paragraph, which also elicited interesting differences between the experimental and control groups, begins as follows:

Some years ago, I visited a well-known demonstration school. Each classroom had a carefully picked teacher. Visiting the rooms in this school with the principal one day, I was much impressed with the beautiful work that many of the students had produced. Classroom after classroom was charmingly and artistically decorated with the children's productions: art work, science demonstrations, biological specimens, collections of all sorts and descriptions. After five or six such rooms we walked into another so different from the others as to be almost a shock. This room was nearly bare of the materials we had seen in the others. Instead, in this class the teacher sat in the middle of a group of children holding a quiet discussion. Leaving the room with the principal, I remarked on this fact, .....

Scoring of the responses is along a single dimension: attitude towards discussion — the value attributed to children's discussions in a lower elementary school curriculum. The range of the ratings is from rejection of discussions and a strong preference for activities (1) through feeling discussions might be good (3) to a strong conviction that they should be included, though not at the expense of other activities (5).

Table 9 shows that five of the eight students in the experimental groups who could increase their valuation of discussion did so and none gave it less importance at the end of the term. The students in the control groups present a very different picture: three positive shifts, three negative shifts, and four no change at all.

TABLE 9. — Final Ratings and Differences in Responses to Incomplete Paragraph #3 — Scored for Attitude Towards Discussion*

| Experimental group | | | Control group | | |
|---|---|---|---|---|---|
| Student | Rating | Difference | Student | Rating | Difference |
| Group I (juniors) | | | | | |
| #1..... | 4 | +2 | #11..... | 5 | +1 |
| 2..... | 5 | +2 | 12..... | 2 | 0 |
| 3..... | 5 | +1 | 13..... | 1 | -1 |
| 4..... | 4 | +3 | 14..... | 4 | +4 |
| 5..... | 5 | +2 | 15..... | 4 | 0 |
| Average final rating | 4.6 | | | 3.2 | |
| Average difference | | +2.0 | | | +0.8 |
| Group II (seniors) | | | | | |
| #6..... | 5 | 0 | #16..... | 3 | -2 |
| 7..... | 1 | 0 | 17..... | 1 | 0 |
| 8.... | 5 | 0 | 18.... | 3 | -2 |
| 9..... | 2 | 0 | 19..... | 4 | 0 |
| 10..... | 5 | 0 | 20..... | 5 | +1 |
| Average final rating | 3.6 | | | 3.2 | |
| Average difference | | 0 | | | -0.6 |

*Difference is positive if second rating was higher.

In the experimental group one student whose opinion about the value of discussions increased first writes:

Student #4: Either this room is not experiencing the realms of all sorts of creative activity, or the children have brought all their work home to their families. This was my "light" remark; but I really wondered why this classroom was practically bare of the lively material that meant so much to me as a child. As we walked in, I thought about how the children in the quiet discussion group were feeling — they must have been so eager to just express themselves with vital activity, motion, and just doing something. There's a time and place for gentle discussions with children, but it just seemed to me that they were being restricted and held down. Children want to be busy and involved with action. This situation seemed actionless to me.

I realized that my short visit was really not enough to form an opinion in, so I scheduled a conference with the teacher of this classroom to talk to her about it and find out her beliefs and goals as a teacher. (First IP #3)

After Grouptalk training, her opinion changes:

Either the children have taken all their art work and material home or this classroom is more engrossed in different aspects of learning.

Knowing that this was a well-known demonstration school, I kind of felt positively about it. If these children were honestly involved in this discussion and seemed to be gaining a lot from it, then this experience must be of great value. And yet, I feel that there should be "creative life" around them. It's beautiful, broadening and stimulating. Life is more than a small, quiet circle. Having some science demonstration and biological specimen in the room gives them tangible evidence of the outside world – more than just themselves. There should be a mixture of everything. (Second IP #3)

Two other students express views at the end of the term on the importance of including peer-centered discussions in the curriculum with even greater conviction:

Student #3: Wow! They seem to be having a Grouptalk or a Classtalk! I was pleased to see that the education of the child at this school included informal conversations. Through this process you get a much more complete picture of a child's personality. This indicated to me that the children were experiencing a very complete process of learning involving all parts of their personality. (Second IP #3)

Student #5: .....the important thing is that all of it come from the children. I also think it is exceedingly important to give the children frequent opportunity to verbalize themselves. (Second IP #3)

Two others retain their previously high opinion of discussions:

Student #6: I feel informal discussions would benefit the child much more – drawing the reserved child out and letting the children help each other instead of heaving a teacher-oriented talk. (First IP #3)

.....discussion is very important in a child's social and mental development ..... It is necessary to incorporate a time for group discussion in that schedule. (Second IP #3)

Student #10: This group of children were becoming an active part in their education ..... they were communicating not through

such media as paint and rocks, but through speech. They were learning one of their most important lessons, how to communicate with others in a very intellectual way. (First IP #3)

.....this teacher is more reliant than the others on group communication. This is a great way to teach them both academics and social learning, how to live and talk with people. (Second IP #3)

Only two students in the experimental groups respond to incomplete paragraph #3 either with skeptical or negative comments about discussion at the end of the term.

Student #9: This room is so different from all the others! What goes on in there? (Second IP #3)

Student #7: .....I am interested in understanding what as a teacher her goals are and how she is trying to accomplish them. I would be curious to know how she has set up her particular room and why. I would express my opinions that children do not learn in a quiet sterile classroom. Hopefully, we would have an honest enough discussion to draw some conclusions. (Second IP #3)

In sharp contrast to the numerous changes of opinion among the majority of the students in the experimental groups, there are almost no shifts whatsoever in the control groups. Five student teachers think highly of discussion at the beginning and do at the end, too. This pair of responses is typical:

Student #11: Perhaps this teacher can reach his class by talking. He may have such a rapport with his children that they find it easy to express themselves in words more than in art work. His sitting in the middle of the group and talking quietly may be of more value to the children than having him stand up in front of the room and give some sort of an assignment which the students would then produce. (First IP #3)

I think that discussion is a very important part of any classroom, as children must feel free to express their ideas and must have the skills to do this. (Second IP #3)

Another student maintains an open mind to both types of teaching techniques:

Student #19: I should think the discussion classroom requires a lot more from the teacher – she relies on herself as a means to educate – other classrooms rely on the materials to educate. Which is more effective? (First, IP #3)

Two students begin the term with a more positive attitude towards the discussion taking place in the experimental school than they have at the end:

Student #16: This teacher was holding a very important activity – that of talking, discussing, and listening. The room they used was of little importance unless they were discussing some aspect of their classroom experience ..... Otherwise things on the walls might have hampered a free discussion in which everything came from the children's mouths and minds alone. (First IP #3)

There is always merit in a quiet discussion between children and teacher when the topic is interesting enough to hold their attention and have everyone contribute. Usually, however, an experience in science or art is much more meaningful and lasting to children. They are geared to play, action, and getting into things; and especially for a less verbal child, the experience learned through doing something is closer to their realm of activity. (Second IP #3)

Student #13: I, too, would be curious why when all the other classes were designed or set up in one way, another room was entirely different. Perhaps the teacher found it more effective to conduct her class in a quiet discussion. Maybe the students in this classroom have the same advantages the other children do during part of the day, and then the teacher likes to take them aside in an informal manner. Perhaps the students are more relaxed in an atmosphere like this. The teacher could also have been trying to test or analyze a group of children by allowing them to talk with her and their fellow students. (First IP #3)

The teacher in this class apparently felt that this type of a classroom was more conducive to working than one with a lot of things going on at one time. I would certainly have wondered, however, if this was the way the class was always conducted and arranged. The appearance of a room often shows the type of personality a teacher possesses. Perhaps this teacher felt that it was more beneficial to the children's learning processes to verbalize rather than to have the children examine things and learn on their own. It sounds as though the teacher was not allowing the children to think enough on their own by not allowing them to create art work or work with learning materials. She sounds as if she would rather have a quiet classroom than one which is maybe noisier but the children are working or playing constructively. (Second IP #3)

Finally, two other students in the control groups start off with a negative evaluation of discussion and do not change:

Student #12: But I wonder if the children in this last room don't feel a little cheated when they see the other rooms ..... I don't think that every teacher can have the same amount of art work or science, etc., in his room just for the

sake of having it, but I wonder if his children feel free to express themselves in this way. (First IP #3)

The teacher must be a very independent person. I would like to speak to her sometime about her methods and the things she emphasizes. (Second IP #3)

Student #17: A room completely bare is very depressing and gives a rather cold feeling. (First IP #3)

It would seem that in a room that was bare, and where the discussion would seem to be teacher-oriented, that a real stifle of the imagination was taking place, and that children were not being allowed to exploit their creative powers. Also, I don't think that they would have the confidence and security in relation to their own work as the other children would have. (Second IP #3)

c. Incomplete Paragraph, #5. — The third paragraph that differentiated between the experimental and control groups begins as follows:

The twenty children in the unstructured second grade classroom were fairly quiet until one boy snatched some blocks away from another child. Three or four others became involved in the loud dispute. One came to tell the teacher what had happened. The teacher .....

The scoring of responses is on two dimensions: (1) amount of responsibility delegated to the children for resolving disputes, and (2) ability to set limits for the classroom with flexibility and without punitive control or moral lectures.

The contrast between the responses of the experimental and control groups, as Table 10 indicates, is considerable. Not only are the average scores higher at the end of the term for both experimental groups on both variables than they are for the control groups, but all the changes that do take place are positive, whereas some of the changes in the control groups are negative.

Excerpts from typical protocols illustrate the positive and negative changes that took place. This pair of responses from a student in the experimental group shows a slight positive increase in delegation of responsibility and effectiveness in setting limits:

Student #4: She walked calmly over to the disturbed area and asked the child who had snatched the blocks away, "Why?" He didn't pay any attention to her until she had repeated his name several times and the other children had noticed the teacher's presence. He really didn't admit why, but just threw the blocks down and stomped off to another section of the classroom and picked up another activity as if nothing had happened. The teacher responded as if nothing had happened too and knew that he knew what he had done. (First, IP #5)

.....must have been engrossed in something deeply if she didn't notice this and had to be told by another child. She went over and asked them to explain what happened. They didn't hear her or pay any attention to her, so she asked them if they could be calm enough and control themselves enough to explain to her what had happened. She asked them if they felt they had used "good judgment" in their decision for the loud dispute. They explained to her what happened and she said that they could continue the block playing if they did so in a sensible way, and if they felt they couldn't do this they could sit in their seats and work quietly at their desks. (Second, IP #5)

TABLE 10. – Final Ratings and Differences after Ten Weeks in Responses to Incomplete Paragraph #5 – Scored for Delegation of Authority and Manner of Setting Limits*

| Student | Experimental group | | | | Student | Control group | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Delegation | | Manner | | | Delegation | | Manner | |
| | Rating | Diff. | Rating | Diff. | | Rating | Diff. | Rating | Diff. |
| Group I (juniors) | | | | | | | | | |
| #1 ..... | 5 | 0 | 5 | +1 | #11 ..... | 3 | 0 | 4 | 0 |
| 2 ..... | 4 | +2 | 5 | +3 | 12 ..... | 1 | 0 | 4 | 0 |
| 3 ..... | 5 | 0 | 5 | +2 | 13 ..... | 1 | 0 | 1 | 0 |
| 4 ..... | 2 | +1 | 2 | +1 | 14 ..... | 1 | 0 | 1 | 0 |
| 5 ..... | 5 | +3 | 5 | +2 | 15 ..... | 1 | 0 | 2 | 0 |
| Average final rating | 4.0 | | 4.2 | | | 1.4 | | 2.2 | |
| Average difference | | +1.2 | | +1.8 | | | 0 | | 0 |
| Group II (seniors) | | | | | | | | | |
| #6 ..... | 5 | 0 | 5 | 0 | #16 ..... | 1 | 0 | 1 | 0 |
| 7 ..... | 4 | +3 | 4 | 0 | 17 ..... | 1 | -4 | 4 | 0 |
| 8 ..... | 5 | 0 | 4 | 0 | 18 ..... | 5 | +4 | 3 | +2 |
| 9 ..... | 2 | +1 | 5 | +1 | 19 ..... | 1 | -3 | 3 | -2 |
| 10 ..... | 5 | +3 | 5 | +2 | 20 ..... | 4 | 0 | 4 | -1 |
| Average final rating | 4.2 | | 4.6 | | 2.2 | 2.2 | | 3.0 | |
| Average difference | | +1.4 | | +0.6 | | | -0.6 | | -0.2 |

*Difference is positive if second rating was higher.

Another student changes her answers considerably more. At first the teacher makes the decision and may have to punish a child:

Student #5: The action of the teacher would of course depend on her experience and knowledge of the children in the situation in the past. She should listen to the explanation of not only one child – but all the children involved and try to arrive at a decision that not only will allow the children (sic) but one that will bring the children who are fighting against one another to better terms.

One child might have to be reprimanded. It depends on the situation. The important thing is that the child knows he is being treated fairly. (First, IP #5)

In the second response, authority is delegated to the children, and the teacher is flexible and non-punitive in guiding the children to a solution of the problem:

Student #5: I believe strongly that children of this age must begin to work things out for themselves — but they are NO longer babies and the teacher must not make decisions but rather act as a guide to help the children work these things out. As a guide there are several factors that would have to come into consideration — first her understanding of the children involved — does the boy who started this do this sort of thing frequently — was there any motivation for the boy snatching away the block. These things and many more would have to be taken into account before the teacher could guide the children so that they could make a decision about what was to be done. If the children are unjust and the teacher is aware of this, then I think she would intervene to talk with the children to point it out to them. (Second, IP #5)

In the responses of the control groups the predominant picture is: no change at all. The following pair of protocols is typical in this respect:

Student #16: The teacher asked both sides of the dispute to tell what they thought happened. She listened to each side openly and was willing to let every child describe his story completely. When she had heard both sides she was still unable to settle the dispute. But she explained what had been wrong about every action and why. In this way each child was able to understand his actions and the teacher's justice. (First, IP #5)

The teacher asked each child involved to give her his version of what had happened. When she had heard everyone she was able to see what had happened. Someone had clearly been in the wrong. She took this opportunity to talk to all the children about the responsibilities of being a member of a group. She wanted them to understand that others' feelings must be respected and that when one is part of a group one cannot forget that people will have different ideas and feelings which must be remembered if everyone is to function in the group. (Second, IP #5)

Three students have lower scores at the end than at the beginning. The shift in their answers is toward greater teacher participation in the decision process and inflexibility in setting limits:

Student #17: .....at first just glanced over to the area where the commotion was taking place. She made sure that bodily harm was not taking place, and then she waited a couple of minutes to see if the argument resolved itself. If not, she quietly walked over and asked the boy why he had taken the blocks. Noticing the other children standing around, she asked them if they could think of a solution to the problem. She tried to act merely as a guide in letting the children solve the problem, and understand what their own feelings were. I do not care for unstructured classrooms, but I think I would have acted very similarly in this situation because I think that children should reason for themselves, and offer their solutions because they usually have the simplest and easiest solution to a problem when given the opportunity to think about it rather than being told just what to do. (First, IP #5)

The teacher walked over to where the dispute was taking place and asked who had been playing with the blocks first. Then she explained to the children that there were not enough blocks for everyone to use, and that if you wanted more that you had to ask for them. If X was still using them, then you would have to wait until he was finished. Then I would try and suggest some other activity that the child could engage in or suggest ways that he might use the few blocks that he had. (Second, IP #5)

Only one student in the control groups has a higher score on both variables at the end of the term:

Student #18: The teacher brought all the children involved in the dispute together to find out what happened. Although the emotional reaction would be to put the blame on the boy who is reported to have taken the blocks, I feel it is important to hear from him also. When a child is involved in the decision as to right and wrong and punishment, he is much more likely to abide by the ruling and feel the teacher is just and fair. (First, IP #5)

The teacher went quietly over to the group and asked them to relate the story. After hearing both sides they discussed as a group why this activity was not beneficial and what should be done. The teacher then left and let the second graders settle it. (Second IP #5)

d. Summary of Findings. — Important differences between the experimental and control groups emerge from this quantitative analysis. The findings indicate: (1) increased sensitivity to group dynamics, (2) a higher evaluation of children's discussions, and (3) a shift in their thinking about classroom management — with the shift characteristic of the experimental groups only.

2. Individual Patterns of Response Another way of analyzing the Student Teacher Paragraph Completion Test involves comparing the pattern of responses to each story before and after the student teaching experience, then looking for congruence of a student's answers from one paragraph completion to another — a complex and lengthy clinical procedure that yields a maturity score. In reading each story in the second set of responses, attention is focussed on evidence of change and growth in the following areas: (1) basis of commitment to teaching, (2) objectives of good teaching, (3) techniques for achieving teaching objectives, (4) sensitivity to others — adults, individual children, groups. Looking at the protocols in this fashion sometimes leads to a different picture than is obtained by scoring variables. For example, in the context of her answer to IP #1 a student may comment on the importance of the teacher's structuring situations to build up trusting relationship, but not make this explicit in answers to IP #3 or IP #5, which consequently are scored lower. This method of analyzing the test data leads to much more meaningful information about a student teacher's growth during her apprenticeship than the dimensional analysis, but it is extremely difficult to quantify.

An important and not unexpected finding emerges from the pattern analysis: differences in pattern between individuals are much greater than are changes in student teachers before and after apprenticeship. Highly individual patterns of opinion are revealed which have a remarkable degree of stability over the short period of time involved here. Even the language used to express ideas is strikingly constant, as the reader may have noted in some of the excerpts from paired protocols. Yet many students, in taking the test for the second time, spontaneously commented on having forgotten completely what they had written earlier, and genuinely wondered what they had said.

The contrast between two sets of responses to IP #1 — Student #3 being less mature than Student #15 — is an excellent illustration of the individuality and the stability in outlook characteristic of responses. The manner in which these two student teachers complete the other four paragraphs conveys equally impressive and stable evidence of their difference in maturity:

Student #3: Her initial reaction was one of shock. A teacher with many years experience must be very narrow minded to take such a view of young children. In fact the teacher must not trust anybody very much. She must not be very responsive to the needs of her children either. The student teacher felt that not to trust the children would show a lack of self-respect and respect for other individual's needs and characters. A basically insecure and paranoid person would feel the students were trying to embarrass or destroy her.

As a student teacher she tried to convey the feeling of trust and respect for the children through individual contact at first. She discussed her feelings about the classroom with the teacher. The student teacher felt the classroom structured to the point of rigidity where individuality and creativity were stifled. She asked to try teaching a lesson

allowing for more individual choice and freedom, showing her trust in the children. (First IP #1)

She immediately felt that the teacher had very little trust for people and specifically for the children. The teacher seems to have a persecution complex and appears to be very paranoid. The teacher seems to have very shallow understanding of education and learning. "I wouldn't be surprised if her class were highly structured to keep the children in line," said the student teacher!! The teacher must not be very sensitive to her children or understand them very well if she is so obsessed with discipline. The teacher's own ego demands have become so completely important that the teacher is unable to give anything to her children and therefore is a terrible teacher. (Second IP #1)

While Student #3 may have an excellent understanding of the cooperating teacher's personality and of the children's needs, she disregards and appears to be insensitive to the effect of her own actions on the teacher and the functioning of the class. The other student teacher is cognizant of this complexity:

Student #15: A student teacher in this case may use this piece of advice to draw some conclusions about her teacher. It is reasonable that the teacher does not want a chaotic classroom as they would be unable to accomplish many things. However, the teacher's use of the phrases "upper hand", "enjoy scheming to embarrass and destroy...", may indicate the teacher's general inability to handle her class. Therefore, she feels she must protect herself from the children. The student teacher should doubt such intentions on the part of the children. She feels the necessity for the authority role of the teacher — but also, the necessity for teachers and students working together to learn and enjoy activities of the classroom. It is possible that by the time the student teacher enters the classroom a barrier had been formed between the children and the teacher. She must keep in mind the teacher's feelings on the matter — and perhaps work to ease the tension that exists. (First IP #1)

Because a student teacher is inexperienced in dealing with a class of children, it is very possible for her to join in with her cooperating teacher in adopting the same attitudes and techniques. Without realizing it, a student teacher can make the mistake of not trying to form her own opinions and ideas. This alertness is very important for any student teacher.

In reference to the above situation, the student teacher must consider this advice analytically. The cooperating teacher cited two faults of the children: (1) they're not to be trusted, and (2) they constantly try to destroy the teacher. Without much investigation, it may be assumed

that this teacher is actually afraid of the children in her class. Consequently, she feels she must maintain "the upper hand", or a dictatorial control.

It is difficult because a student teacher cannot walk into a classroom and change it entirely. She must work herself into the already existing system. Her dealings with the children, as a whole, must somewhat coincide with that of her cooperating teacher — or else, she may develop an unbalance that may be hazardous to the functioning of the class into which she steps for only a short period of time. However, the student teacher in this situation must take it upon herself to be very observant: to speak with individual and small groups of children as much as possible. When she begins to take over lessons, etc., she can give the children a chance to take a more direct role. She must engender situations in which she and the children are working together. These kinds of things will foster trust and a more comfortable learning situation.

From time to time, she should inform her teacher of her progress and activities in this area. These discussions may have an effect on the cooperating teacher. (Second IP #1)

Pattern analysis, because its focus is on change in an individual, is a sensitive tool for detecting reliable evidence of growth. For example, the growth shown by the difference in Student #11's responses to IP #4 is also present in her paired completions of the three other paragraphs:

Student #11: Being a teacher means being in constant contact with young and active minds, most of which, I hope, will be eager to learn as they will be just starting school. Teaching should prove to be a constant challenge as the children will change from year to year and the world around us which needs explaining is ever-changing also. I have always liked young children very much and have found it stimulating to be around them. I like their frankness and their enthusiasm. Education is a field which I want to be a part of because the process of learning is quite exciting to me. I suppose that teaching young children could also be considered a kind of an escape for me because of my uneasiness when I am around adults as compared with children. I could not think of any other profession which I would enjoy as most of them include constant contact and working with other adults. I feel that in teaching I can really do something for somebody and make some sort of a contribution to our society, and thus I do want to become a teacher. (First IP #4)

Being a teacher is a challenging but exciting experience. Watching children learn is very exciting, but creating the atmosphere in which they may and will learn is a hard

job. I enjoy children and am interested in their growth. One can be very honest with children, and they will respond with honesty, and the role of the teacher is to guide them toward learning rather than to spout information for them to absorb. This idea of the really honest interaction that can take place between a teacher and children is very appealing to me. I originally chose teaching as a profession as the only thing which I could possibly do. Since then I have realized that teaching is not quite as easy as that; however, I have also found it to be much more appealing. There is a great deal involved in being a teacher but a good part of it is just helping children to learn about living with other people.

I had felt that going into teaching was a type of escape from dealing with adults; however, I have found that it is no escape from confronting this problem of mine. It is very important to deal with parents and administrators. My main reason for wanting to each is my interest in children. I feel that it also offers the change for me to be myself, and if that is not good enough, to then perhaps change accordingly. I am sure about my interest though I am not sure about my capability. (Second IP #4)

Here perceptions of the teaching situation and of herself have changed a great deal during her apprenticeship. Further gains in maturity with experience can be predicted confidently in her case.

These highly consistent patterns of opinion are impressive, especially since Dr. Bent and I found them to be strongly correlated with differences in the student teachers' self-confidence in assuming the teaching role and in their approach to such matters as directiveness, classroom management, and interest in and respect for individual differences. The pattern analysis, however, is not useful in this exploratory study because the results it yields are too individualized to report and too difficult to quantify meaningfully.

3. Summary of Findings The Student Teacher Paragraph Completion Test data show that the major quantitative difference between the experimental and control groups lies in their evaluation of peer-oriented small group discussions at the primary grade level. Some other important group differences in the direction anticipated emerged in response to IP #1 and IP #5: only the experimental group increased in sensitivity to group dynamics, including those of classroom management. Two incomplete paragraphs were non-discriminating: IP #2 and IP #4.

Analysis of the protocols was also made in terms of patterns of opinion, which call attention to an individual student's growth, not group differences. This method of examining the data helped in the intuitive assessment of what each student teacher in the experimental group had gained from Grouptalk training. It also led to some educated guesses about how the training might have affected students in the control groups — but to report the results of this line of reasoning would be reading tea leaves and an unwarranted invasion of privacy.

The potential usefulness of standardized paragraph completion projective tests for assessing some aspects of student teacher growth is, in itself, a challenging finding and goes beyond the value of the test in the present experimental context.

## D. RATINGS OF GROUPTALK LEADERSHIP

How effective as Grouptalk leaders did the student teachers become? Did all of the students show increased skill? Which aspects of Grouptalk leadership were easy to learn, which hard?

1. Overall Results of Practice Table 11 gives, in terms of overall ratings, my judgment of the students' competence at the beginning and at the end of the practice-plus-feedback part of the Grouptalk training period. These scores represent the average of the ratings obtained on six variables, described in detail after the discussion of the student teachers' overall performance.

TABLE 11. — Overall Rating Scores on Grouptalk Leadership before and after Practice

| Student | Ratings on leadership | |
|---|---|---|
| | Before | After |
| Group I (juniors) | | |
| #1 ..... | 2.2 | 3.0 |
| 2 ..... | 3.6 | 4.7 |
| 3 ..... | 1.5 | 3.8 |
| 4 ..... | 2.3 | 4.2 |
| 5 ..... | 2.5 | 4.3 |
| Average rating | 2.4 | 4.0 |
| Group II (seniors) | | |
| #6 ..... | 2.3 | 2.6 |
| 7 ..... | 2.5 | 4.3 |
| 8 ..... | 2.8 | 4.6 |
| 9 ..... | 3.5 | 5.0 |
| 10 ..... | 2.5 | 2.5 |
| Average rating | 2.7 | 3.8 |
| Average rating (Groups I and II) | 2.6 | 3.9 |

In the first Grouptalk session, Table 11 indicates, the quality of the leadership was a little below average for both groups (2.6), but by the last sessions it was well above average (3.9). This difference in the group average before and after practice (+1.3) is impressive. The scores of most students show significant gains. Seven out of ten raised their score by more than one point, ending with a rating between 3.8 and 5.0. The largest individual gain was +2.3, i.e., Student #3 whose score jumped from 1.5 to 3.8. Some students did not improve spectacularly, ending the term as average or below in Grouptalk leadership.

The rating of Student #10 remained stable at 2.5 and two other students showed only small gains.

On the average the juniors and the seniors are quite similar in their initial capacity (2.4 and 2.7) and also in the level of competence achieved at the end (4.0 and 3.9). Although the initial range is greater in Group I (1.5 to 3.6) than in Group II (2.3 to 3.5), the situation is reversed at the end: Group I shows less variability and a smaller range (3.0 to 4.7) than Group II (2.5 to 5.0).

2. Six Variables of Grouptalk Leadership The foregoing scores on Grouptalk leadership are averages only. They are derived from ratings of performance on six variables. The first three variables relate to performance of the leadership role in accordance with the directives explained in the Manual for Grouptalk Leaders (Whipple, 1969), which the students had read before conducting their first sessions:

1. Ability to focus on group process only and avoid intervention in the content of the discussion
2. Ability to use a variety of techniques to keep the discussion both flowing and peer-oriented
3. Ability to help the group follow the rules of Grouptalk.

The next two variables concern the leader's responsiveness to the situation, the combination of intellectual and intuitive understanding that is required of good Grouptalk leadership:

4. Sensitivity to the needs, abilities and limitations of the individual children
5. Sensitivity to group dynamics and ability to promote cohesiveness.

The final variable concerns the quality of the interpersonal style:

6. Consistency in the maintenance of supportive, non-punitive authority.

My ratings attempted to take into consideration the difficulty of leading the particular children in each of the groups, i.e., I gave higher ratings for average performance with difficult groups than with easy groups. This I felt competent to do, since I had watched the children in their classroom and had led their first Grouptalk session.* There are no measures of the degree of difficulty of leading the various children's groups, nor measures of leadership ability before training. The first rating was given after the student teachers had participated in several adult sessions and read the Grouptalk manual; therefore it represents ability before practice in leadership, not before training.

*Most groups included a "problem" child (i.e., one who was a source of disruption in the classroom, or had repeated a year, or was receiving special treatment, etc.). Nevertheless, some of these groups I found relatively easy to lead.

It is important to note that the second series of ratings refer to leadership of groups which were being asked to handle increasingly difficult tasks — such as deciding on their own Grouptalk question — hence the skill demanded of all the leaders became greater with time. In a very real sense, some learning and increase in skill had to take place for a student teacher to receive the same rating before and after practice, i.e., the final ratings systematically underestimate progress.

Selections from my comments about three student teachers after listening to their first and last Grouptalk sessions perhaps should make my ratings of their leadership performance more meaningful:

Student #2: .....Seems very much at ease (said her fears disappeared almost immediately). Relatively few content responses and evaluate reactions (said she heard herself saying "good idea" and knew she shouldn't, but taught to do that by classroom teacher). Asked children for response to what another one had said, with excellent results. Outgoing and sensitive. No problem children in the group. (First rating: 3.6)

.....With notably few exceptions, stays completely clear of content and promotes peer-directed discussion. Keeps her own interactions at a minimum, yet is directive when necessary. Group has achieved very high quality discussion, which they and leader obviously enjoy. Group has assumed most of leadership functions. (Second rating: 4.7)

Student #3: .....not very sensitive, response to children too rational .....interested primarily in brighter children and their ideas..... Gets discussion confused by her own strong interactions with the children and lack of ability to follow the multiplicity and fluidity of their contributions..... not supportive of group effort — ends session with negative comment: "Since you don't have anything more to say, we'll listen to the replay." (First rating: 1.5)

.....Leader seems more secure: happier tone to her voice.....children enjoy session.....group's excellent discussion proceeds without frequent interruptions, though still a few unnecessary ones.....helps discussion keep going with spot summaries.....achieves contributions from everyone in the group, including the shyest member. Still could be more supportive and less intellectual in her approach. (Second rating: 3.8)

Student #5: .....Even though she does a fairly good job of leading discussion, group gets completely out of hand because of short attention span of problem child. Leader tries to push for too long a discussion under the circumstances — lack of flexibility. Also needs greater facility in helping children to expand on their ideas. Calm, firm and warm at all times. (First rating: 2.5)

.....When group gets off subject, brings them back quickly and well. Makes good use of techniques that keep discussion directed to peer-group. Complimentary after effective exchange. Has managed to keep problem child from disrupting group, though child incapable of sustained participation. Excellent group cohesion, considering the circumstances. (Second rating: 4.3)

Most students, but not all, made gains on each of the leadership variables measured. Table 12 breaks the overall rating on leadership ability down into its component parts for the two experimental groups. The student teachers became particularly adept at confining their comments and expressions of enthusiasm or disapproval to the process of the discussion and not interacting in matters of content (2.8 to 4.1). They became more skillful in helping the children keep discussions going and in making them peer-oriented — not directed toward the leader (2.4 to 3.9). Their competence in guiding the children to observe the rules of Grouptalk increased (2.4 to 3.8). The student teachers became more aware of individual differences, quicker to understand the children's communications, both verbal and non-verbal (2.6 to 3.9). They also responded with much greater sensitivity to the group's interactions, the average gain in this category being the largest of all (from 2.1 to 3.8). Finally, there was some change, although a much smaller one, in interpersonal style (3.4 to 4.0). Some of the student teachers became more confident in the leadership role, more consistently non-punitive and supportive. In this one respect the Wheelock students had been above average as a group at the beginning, so there was less leeway for improvement.

These ratings, I should repeat, apply to leadership of children's groups which differed considerably in their initial cohesiveness. The quality of the student leadership, hence the ratings, might have been somewhat different had the groups been interchanged. Another point should be mentioned: my ratings do not always coincide with the student teacher's self-appraisal of competence. In two cases where I judged inadequate progress, the students thought they had made quite a bit. The eight other student teachers and I were in closer agreement.

3. Summary of Findings The data on changes in Grouptalk leadership skill with practice indicate large increases for seven of the ten student teachers. Towards the end they were much more adept in guiding complex small group interactions in accordance with the philosophy of Grouptalk technique than they had been with the initially simpler one. The other three students, although more competent than at the beginning, did not become highly accomplished Grouptalk leaders. The increase in skill for both juniors and seniors was most marked in learning to avoid content interactions. However, both groups showed some gains on all six leadership variables.

TABLE 12. – Average Group Ratings for Grouptalk Leadership on Six Variables before and after Practice

| Leadership variables | Ratings on leadership | | | | | |
|---|---|---|---|---|---|---|
| | Group I (juniors) | | Group II (seniors) | | Both groups | |
| | Before | After | Before | After | Before | After |
| Functions of leader - avoids content | 3.0 | 4.4 | 2.6 | 3.8 | 2.8 | 4.1 |
| Sustains peer-directed discussion | 2.4 | 4.2 | 2.4 | 3.6 | 2.4 | 3.9 |
| Guidance in Grouptalk rules | 2.2 | 4.0 | 2.6 | 3.6 | 2.4 | 3.8 |
| Sensitivity to individuals | 2.4 | 3.8 | 2.8 | 4.0 | 2.6 | 3.9 |
| Group process | 1.8 | 3.6 | 2.4 | 4.0 | 2.1 | 3.8 |
| Inter-personal style | 3.2 | 4.0 | 3.6 | 4.0 | 3.4 | 4.0 |
| OVERALL RATING | 2.5 | 4.0 | 2.7 | 3.8 | 2.6 | 3.9 |

## E. ADULT GROUPTALKS

The selection of the questions for discussion in the adult Grouptalk sessions (cf., Appendix II) provided opportunities for increased understanding of children and the teaching process. To what extent did they contribute to the students' growth?

1. Juniors The following excerpts from the first experimental group's adult Grouptalk sessions illustrate changes of opinion, insight and growth, brought about through these discussions.

In Grouptalk #2 the question was, "How are the rules of Grouptalk learned?" Student #1 suggests that the rules should be defined: "It's hard to follow rules that aren't defined." The others, thinking back to the previous week's discussion, realize they had been following rules without any formal presentation of definitions. Student #2: "You learn by doing, so to speak: you learn the rules by carrying them out in a group situation." Student #1 assumes that children, however, need to have rules presented to them: "What about with children? Would that work if you have to tell them the rules first?" By the end of the discussion, Student #1 realizes how she herself has learned the rules of Grouptalk. This leads to a much clearer understanding of how she,

as a teacher, might communicate them to a group of children without a long explanatory preamble.

The next Grouptalk session (#3) further solidifies her change in point of view. The question was, "What are the implications for classroom management of the method used to introduce you to Grouptalk?" The students, after reaching agreement on the meaning of the question, all help formulate how the method used to introduce them to Grouptalk applies to the classroom.

Student #1 summarizes their conclusion:

> The method is not telling on the part of the teacher, and having the child tell. And that could be for one child or 30 children. We were never told. We just did, and thought about it after. Applied to a classroom, I think that's the major implication.

Student #2 adds another point:

> Structure is placed there for the children to have to discover it. There's an opportunity, an environment, in which they can discover it instead of having it pointed out to them.

The fourth adult Grouptalk session took place after each of the student teachers had watched me introduce Grouptalk to the children in the second grade group she would lead. The question which I had selected called their attention to the way a teacher structures a specific learning situation differently in response to individual differences among the children and to differences in group cohesion. They compared their observations of my leadership technique in leading the different groups. This led to a better understanding of how flexibility in teaching takes both individual differences and group dynamics into account. Their summary brings out both points:

Student #1: We all had some similar and some.....quite a few different experiences with the kids in terms of how well they listened to each other, whether they were very verbal, whether there was one child who was particularly expressive, or everyone seemed to participate. Certain people had very quiet children. And all these qualities appeared in different Grouptalks.

Student #3: Also, we talked about the leader having to keep bringing up different points and trying to keep everything under control more in one Grouptalk than in another.

Student #4: And differences in how much the leader had to enter into the Grouptalk in order to keep it going.....

Student #1: And orient the children to what each individual child was saying to try and make the group more cohesive. Some groups seemed to be quite cohesive right from the beginning.

In summarizing the next Grouptalk session, concerned with Grouptalk leadership technique, Student #3 says:

> We've talked about discipline. We've talked about not expressing our own values on what they've said – like telling them, "That's a good idea," "That's a bad one," or like, "That idea is great." I think we've not only looked at the children. But we've also looked at ourselves .....how we can change to handle them better.

Grouptalk question #6, "What has Grouptalk taught you about children?" elicited an interesting interchange from which the following comments about second graders are drawn:

Student #1: It's taught me primarily that children are still self-centered to some degree at this age. They like to hear their own ideas, voices on the tape recorder. And I think that I haven't really zeroed in on how much they wanted to express themselves.....

Student #4: I found that they have the ability at this age to interact and that they can. And that there's a certain level on which they do. They're not only concerned with what the teacher thinks of what they're saying, but they are interested at this age with what one another is saying, and how their peers react.

Student #1: .....the other children can help build up their own self-image.

Student #2: .....there's also a need to still stick to fantasy and to still have fantasy a part of their everyday life, whereas the kinds in my third grade are a little more realistic and a little more social.....

Student #4: I learned a whole lot from the fact that they can nonestly tell you how they would react in a situation, if they were called upon to react as an adult in a serious situation, what they would do. And they've got some very definite ideas about it.

Student #1: But in addition to that, they also rely an awful lot on releasing a lot of energy and a lot of tension through fantasy. Maybe for a lot of children in this age group it's an important part of their security.

Student #3: They're really capable of a lot more independence than I formerly thought they were. Because they don't need a step-by-step guidance. Just once they think they understand something, they just take it right over. And this really amazes me. They're capable of a lot.....they're so perceptive, too.....they remember sometimes better than I can. If you say something, you're going to have to remember. Like standards you set for discipline – you're

going to have to remember what you've said because, if you loosen up, they're going to remember and pick you up on it.

Student #1: They have a great sense of fairness and justice. They see that something isn't fair — everyone isn't given the opportunity to express themselves — and chances are they'll let you know about it.

Student #4: Their personalities are very defined and they're very different.....just small things that you pick up in Grouptalk that you might not be able to notice anywhere else: the repetition of certain ideas in different questions, the reactions to certain types of situations..... In just a matter of three half-hour sessions that we've had, I'm surprised at how many things you can pick up that might take you months in the classroom..... You might never get an opportunity in the classroom, no matter how good a teacher you were, no matter how much individual attention and how much interaction there was with them talking, because this is something that's completely irrelevant to the classroom. You don't discuss the way you do in class. So you're getting a different side of the child.

As they talked together and shared insights they had gained, new learning was taking place.

2. Seniors The older group of student teachers show the same type of growth stimulated by the adult Grouptalk discussions. Even though these girls had already had a period of school apprenticeship the previous spring, their first session shows that they are still trying to formulate aspects of their own philosophy of education, to decide how much freedom of choice should be given to the individual child, and how much order the teacher should impose. All of them strongly reject the rigidly structured classroom. But beyond that, how much structure should a good classroom have? They are confused, as Student #8 indicates:

> How about those classrooms where you walk in and kids can choose what they want to do when they want to do it? And, if they don't want to finish what they're doing right now, they can go on to something else — is that an ordered classroom? Or is that a chaotic situation where they need restrictions? This is a question that's been bothering me.

In their second adult session they attempt to understand how they learned the rules of Grouptalk. They talk about learning through participation, discovery, then go beyond that to recognize that the discussion about the rules which they are having is also an important part of the learning process; furthermore, that the situation had to be carefully set up for them by the leader to accelerate their learning.

The two sessions subsequently devoted to discussions of Grouptalk leadership technique were helpful in directing their attention to the

complexities of group dynamics. For the last session, the four student teachers present selected their own question, "What have we learned from Grouptalk?" The answers, they decided, would cover not only their own learning, but also what they thought the children in their groups had learned from being exposed to this new discussion technique. They listed a wide variety of things learned:

Student #9: .....your opinions don't come nearly as much into play as far as determining the success of the Grouptalk goals. It's more that you are following a prescribed method of dealing with children rather than supplying them with the richness of your own resources..... You're not fishing for ideas and trying to use yourself as a stimulator of ideas as much as you're just trying to get the children to realize a certain way of discussing, no matter what they're discussing.

Student #10: No matter how much knowledge the leader has about the topic being discussed, it really doesn't matter.....it's not relevant.

Student #7: You learn to let them have their own ideas. As a teacher, or as a leader, you learn to give up a lot of prescribed notions on what you think they should say and they should come out with. And you realize that they have their own ideas which are just as valid, if not more so, than yours.

There was general agreement that Grouptalk sessions help promote learning through discovery, that there are no right or wrong answers to the best questions chosen for discussion. But the argument became heated when they attempted to follow through the implications for classroom teaching. Should the teacher care whether the discovery process leads the child to the correct answer in such things as math and reading? One student teacher said she was not at all concerned about correct answers: "I believe that in teaching the process is more important than the content." (Student #6) Others were equally convinced that the goal of a math lesson also involves learning to get correct answers, that this is a fundamental part of teaching. Grouptalk in this sense also has an end product: to better equip the children to know how to carry on a discussion with each other. The children learned this:

Student #9: .....because of the way we guided them, you know: "Stay relevant," "Do this," "Do that," "Don't do that," "That was good," "That was very good." Encouraging them .....discouraging them from talking at the same time. So yeah, we teach them that.

All agreed that they had become more aware of the need for structuring situations in order to promote learning through discovery, that children's trial and error needs guidance:

Student #10: I think the children are learning also through their mistakes how to talk to other children, how to share their

time, how to listen to others..... especially by hearing their tape replayed.

There was greater awareness of the conceptual development of second graders and how this affects the sensitive teacher. The importance of double checking the adequacy of communication was stressed:

Student #7: I think we've learned about how children think about different things and how at a certain age level they have no concept of what something meant or how they could define words. They don't.....at this age they cannot do it. They don't see it at all. I found that mainly because of the definitions.....it isn't the same as how a child at a higher level, grade, understands things..... So when it's carried into the classroom, you realize when you say something, it may seem perfectly logical to you, but they don't understand it the same way. Then they really don't know..... like time concepts: it may seem logical to you that, for example, they should know to come back in ten minutes. But they don't understand it and they'll come back in two minutes. I think there are things you should approach differently or should word differently. If you say certain things you are just not going to be understood. And you should understand why they're not being understood; not just because the children are stubborn or ignorant, it's just that at this stage.....they haven't got all the background for it.

Small group interaction was better understood:

Student #10: I've seen a lot in how a small group interacts, a small social unit will interact with one another, which is really important in the classroom, especially in a personal situation, where it is basically socially oriented, where their interaction is very important..... I'm learning when to cut off a conversation when the children start getting restless and their attention is gone. I'm learning how and when to cut them off.....

Everyone learned that choosing a good question for the Grouptalk is very difficult. A question that one group found exciting might lead to scapegoating in another:

Student #7: I think it's hard. It really takes sitting down and thinking about each one of those children individually and then thinking of each one of those children interacting with the group, to get a question that's going to interest all of them, that's going to try to avoid some of the problems that they run into with each other.

3. Summary of Findings The content of the adult sessions of both experimental groups suggests that the Grouptalk experience contributed in a number of important ways to the students' education as teachers, and that participation in the adult Grouptalks was an essential part of the learning process.

## F. FINAL PAPER

Most students took very seriously their individual studies assignment, even though performance in the student teaching course is not given an official grade, just pass-fail. They knew that their gains from the individual project would be a function of what they put into it and that it would help in their self-evaluation as well as supply data for this exploratory study. Here was an opportunity to relate educational theory to practice on the basis of their own experience. How did the experimental and control groups react to this opportunity to learn?

1. Control Groups The projects selected by the first group of control student teachers covered a variety of areas: creative writing, oral expression, creative dramatics and social studies. The seniors worked in the fields of individualized reading, science, creative speaking and art appreciation. There was pressure from Dr. Bent to teach a small group of children only, not the entire class. But, in view of the varying needs of the cooperating teachers, this request could not be made mandatory. Most of the studies but not all involved teaching the children something. Several created opportunities for self-expression and one was primarily observational.

With the exception of one very long paper of 14,000 words, the reports run about 3,000 words. In the introduction there is a statement of the project's relevance to the student teacher's interests and to the education of young children. Usually there are numerous references to what educators have written on the topics. The bulk of most papers consists of detailed descriptions of the project which tend to be chronological. There are many sensitive portraits of individual children and accounts of their activities. But, with two notable exceptions, answers are sparse to the four assigned questions: (1) What did the individual children learn? (2) What changes took place in the group? (3) What did you learn about children? and (4) How has your self-image been affected?

Was this failure to supply the data so essential to the experimental study perhaps because of the character of the projects undertaken? Only one of the student teachers in the first control group worked exclusively with a small group. The others taught a unit to the entire class and made special observations on four or five children who, for the most part, did not constitute an interacting group. It was difficult, if not impossible, under these circumstances to talk about group dynamics. However, three of the students could have focussed far more than they did on the other assigned questions. Perhaps our instructions for writing the final paper had been insufficiently stressed? All the students in the second control group worked part of the time with small groups, their plans were submitted before mid-term, and their attention was carefully drawn to the questions they were supposed to answer. Yet they too were erratic in commenting about what the children had learned, changes in the groups they worked with, what their individual study had taught them about children, and how it had affected their self-image as a teacher. Why? Was instruction in Grouptalk techniques needed in order to focus their attention on these areas?

In presenting my evaluation of the final papers, I decided to minimize interpretation by quoting extensively. In many cases I have included all of the relevant quotations from all of the papers. Where I have not done this, I have indicated either that the quotation is the student's typical response or that other students have included similar material. It should, therefore, be possible for the reader to draw his own conclusions from the data and independently to evaluate Grouptalk as a teacher training instrument.

a. Observations on What the Children Learned. — Six of the ten control students' answers to this question convey the impression of great sensitivity to individual differences. Two are moderately detailed. One student failed to say anything about the children in her group. Another describes them primarily as a unit:

Student #18: These were all children I had observed as alert, aware of many varied topics, and most verbal. I felt that for the benefit of the whole group, I should choose children who would be interested and would contribute to the discussion.

This student had no interest in differentiating among the children or in teaching them, so she sidestepped the question of what they may have learned. She wanted to learn more about second graders' abilities, using as source material the responses verbal children would make to a certain type of lesson.

Statements about what the children learned cover a variety of areas. They touch on greater social awareness, greater self-expression, gains in knowledge or skills related to the specific ongoing project. Some children learned to write better, some to read better. Some learned facts in a social studies project. Others learned about communication and had a chance to talk to each other and to the rest of the class. Some learned how to participate more creatively in informal dramatics. It is impossible, however, in reading half of these accounts, to follow the progress of an individual child, to see in what particular way the experience had been enriching for him:

Student #11: I was sorry that I could not examine these children's development more closely, but for the type of project I chose, I thought it more beneficial to work with the whole class at once.

Student #16: As I could only work with my group an average of 45 minutes per week for five weeks, it is impossible to measure any real overall gains. I can honestly say that James' attitude was one of sincere respect for me in the classroom — a direct result, I feel, from Creative Dramatic work. It is difficult to say that John's image changed — but I think if this program was carried out over a longer, more concentrated period of time, it definitely would help my Cherubs. Again, a marked change in Donna and Ellen could not possibly be noted. Robert's attitude on our last meeting was one of complete alienation from the